County of Los Angeles
Department of Public Works

Water Quality Monitoring
2004 Annual Report

for the

Master Mitigation Plan
for the Big Tujunga Wash Mitigation Bank

January 2005

MWH

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2004 Annual Report

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Water Quality Monitoring
2004 Annual Report

ANNUAL SUMMARY

Water quality sampling was conducted at four sampling stations at the County of Los Angeles Department of Public Works (LADPW) Big Tujunga Wash mitigation bank for four quarters of 2004. Samples were collected at three points along Haines Canyon Creek (the inflow to the Tujunga ponds, the outflow from the ponds, and in Haines Canyon Creek leaving the mitigation bank site) and in Big Tujunga Wash in April, July, October, and December of 2004 (**Figure 1**). Parameters monitored included temperature, dissolved oxygen, pH, nutrients, turbidity, bacteria levels, an insecticide (chloropyrifos), and a herbicide (glyphosate). Both field meters and laboratory analyses were used in the water quality sampling program.

In Big Tujunga Wash, flow was observed only on the December sampling date during 2004. Water was present at all other stations for all four sampling dates. For most parameters, observed water quality met Regional Water Quality Control Board (Regional Board) Basin Plan objectives and EPA's recommended water quality criteria for freshwater. Temperatures were cool enough and dissolved oxygen concentrations generally high enough for growth and survival of warmwater fish species. Observed pH values ranged from 6.7 to 8.8 units; residual chlorine and pesticides were not detected; and turbidity levels were generally low. Excessive nutrient conditions were not noted. A degree of nitrogen reduction was observed between inflow and outflow from the Tujunga ponds. Fecal coliform levels were below the water contact recreation standard at all sites in the second and fourth quarters. In the first quarter, higher fecal coliform levels were observed in Haines Canyon Creek and in one sample from the outflow from the ponds. In the third quarter, higher fecal coliform levels were observed (in one sample) in Haines Canyon Creek.

Sampling will continue in 2005. Future results will be compared with baseline 2000 data and with the 2001, 2002, 2003 and 2004 results. Construction of the Angeles National Golf Course upstream has mostly been completed, and the golf course opened in April 2004. Additional work on the golf club and the parking lot is ongoing.

BACKGROUND

LADPW purchased a 207-acre parcel in Big Tujunga Wash as a mitigation bank for County flood control projects throughout Los Angeles. In coordination with local agencies, the County defined a number of measures to improve habitat quality at the site. A Master Mitigation Plan (MMP) was prepared to guide the implementation of these enhancements. The MMP also includes a 5-year monitoring program to gather data on conditions at the site during implementation of the improvements. The MMP was prepared and is being implemented by Chambers Group, Inc. MWH, a subconsultant to Chambers Group, is responsible for the water quality monitoring program described in the MMP. This is the

fourth annual report on water quality. The 5-year program began in the fourth quarter of 2000.

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 at the far eastern portion of the site.

Project Site Activities

A timeline of project-related activities that could influence water quality is presented in **Table 1**. This table will be updated and expanded as the monitoring program progresses.

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

Month/Year	Activity
4/00	Baseline water quality sampling
11/00 to 11/01	Arundo, tamarisk, and pepper tree removal Chemical (Rodeo®) application
12/00 to 11/02	Water hyacinth removal
12/00	Fish Sampling at Haines Canyon Creek
12/14/00	Water quality sampling
1/01 to present	Exotic aquatic wildlife (non-native fish, crayfish, bullfrog, and turtle) removal – conducted quarterly
2/01	Partial riparian planting
3/01	Selective clearing at Canyon Trails Golf Club
3/12/01	Water quality sampling
6/19/01	Water quality sampling
7/01	Fish Sampling at Haines Canyon Creek
9/11/01	Water quality sampling
10/01 to 11/01	Fish Sampling at Haines Canyon Creek
12/12/01	Water quality sampling
1/02	Final riparian planting
2/02	Upland replacement planting
3/26/02	Water quality sampling
6/25/02	Water quality sampling
7/02	Fish Sampling at Haines Canyon Creek
9/12/02	Water quality sampling
10/02	Grading at Canyon Trails Golf Club begins
11/02	Fish Sampling at Haines Canyon Creek
12/19/02	Water quality sampling
3/20/03	Water quality sampling
4/1/03	Meeting with Canyon Trails Golf Club to discuss future use of herbicides and fertilizers
6/23/03	Water quality sampling

Table 1 (Continued)
Major Activities to Date at the Big Tujunga Wash Mitigation Bank

Month/Year	Activity
8/03	Fish Sampling at Haines Canyon Creek
9/30/03	Water quality sampling
Fall 2003	Completion of the golf course construction
12/17/03	Water quality sampling
1/04	Fish Sampling at Haines Canyon Creek
4/2/04	Water quality sampling
4/3/04	Rock Dam Removal Day
6/04	Angeles National Golf Club (previously named Canyon Trails) opens to the public
7/2/04	Water quality sampling
10/5/04	Water quality sampling
12/9/04	Water quality sampling

Water Quality Monitoring Program

In order to establish water quality upstream and downstream of the site, quarterly sampling and analysis will be performed for 5 years, for a total of 20 individual sampling days. 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). Potential impacts to aquatic species from run-on to the site that contains excessive nutrients or pesticides are of primary concern.

The golf course has been operating since spring 2004. Additional construction at the club house building is in progress and is scheduled for completion in spring of 2006 (J. Reidinger, Angeles National Golf Club, pers. comm. to A. Kawaguchi, MWH, December 2, 2004). During construction, the golf course established and implemented an erosion control plan including catchment basins and silt beds. Runoff is being captured by onsite percolation basins and retention ponds. Weed abatement during construction consisted of hand pulling, and no herbicides were used.

In March 2004, the golf course maintenance staff indicated that the following chemicals may be used on an as needed basis: Primo™ (a grass growth inhibitor used for turf management; active ingredient – trinexapac-ethyl) and Rodeo® (an herbicide used to control aquatic weeds; active ingredient – glyphosate) (J. Reidinger, pers. comm. to M. Chimienti, LADPW, March 18, 2004). Based on this information, glyphosate was added to the list of sampling parameters starting in the first quarter of 2004.

In December 2004, the Golf Club provided MWH with the golf course's monthly pesticide use reports from June to September 2004. The reports indicate that nine types of chemical products (six herbicides, one insecticide, one fungicide, and one grass growth inhibitor) were applied as summarized in **Table 2**.

Table 2
Pesticide Applications at the Angeles National Golf Course
(June – September 2004)

Active Ingredient	Manufacturer and Product Name	Applications
Chlorpyrifos	Dow AgroSciences Dursban Pro (insecticide)	One application (145,000 sq. ft.) in August
Diquat dibromide	Syngenta Reward (herbicide)	Two applications (43,000 sq. ft. and not recorded) in August and one application (87,000 sq. ft.) in September
Flutolanil	Bayer Prostar 70 WP (fungicide)	One application (120,000 sq. ft.) in July and one application (140,000 sq. ft.) in August
Glyphosate	Lesco Prosecutor (herbicide)	Three applications (one 86,000 sq. ft. and two not recorded) in August
Glyphosate and Diquat dibromide	Monsanto QuickPRO (herbicide)	Three applications (20,000 to 30,000 sq. ft.) in June and one application (20,000 sq. ft.) in July
Oryzalin	Dow AgroSciences Surflan (herbicide)	One application (87,000 sq. ft.) in September
Pelargonic acid	Mycogen Scythe (herbicide)	One application (86,000 sq. ft.) in August
Prodiamine	Syngenta Barricade (herbicide)	Three applications (two 86,000 sq. ft. and one not recorded) in August
Trinexapac-ethyl	Syngenta Primo Maxx (grass growth inhibitor)	One application (120,000 sq. ft.) in June, three applications (76,000 to 120,000 sq. ft.) in July, two applications (140,000 and 156,000 sq. ft.) in August, and two applications (60,000 and 128,000 sq. ft.) in September

Source: Angeles National Golf Course Monthly Summary Pesticide Use Reports for June through September 2004.
sq. ft. – square feet

In December 2004, the Golf Club also provided MWH with the golf course's water quality monitoring reports to date, which present the results of the following sampling activities:

- Two downgradient groundwater monitoring wells (located near Foothill Boulevard) have been sampled quarterly since the fourth quarter of 2001.
- Two upgradient groundwater monitoring wells were sampled in October 2001 and November 2003.
- Surface water samples were collected from Tujunga Ponds for the fourth quarter of 2001 and the first and second quarters of 2002.
- Surface water samples were collected from the Big Tujunga Wash when surface water was flowing during the quarterly sampling events (second quarter of 2002, first and second quarters of 2003, and first quarter of 2004). The Haines Canyon Creek has been dry during all the quarterly sampling events to date.
- Surface water samples were collected from the Haines Canyon Creek and the Big Tujunga Wash during storm events in March 2003 and February 2004.

(Source: Angeles National Golf Club Quarterly Groundwater and Surface Water Monitoring Reports from Fourth Quarter 2002 through Third Quarter 2004, Pre-Construction Summary of Groundwater and Surface Water Monitoring (dated April 1, 2004), and Stormwater Monitoring Reports for March 2003 and February 2004. Prepared by MACTEC Engineering and Consulting for the Los Angeles International Golf Club.)

The following are the parameters sampled by the golf course (parameters that are also sampled within the Mitigation Bank are underlined):

- General parameters – pH, electrical conductivity, total dissolved solids (TDS), sodium, potassium, calcium, magnesium, carbonate, bicarbonate, sulfate, chloride, nitrate as nitrogen, nitrite as nitrogen, total Kjeldahl nitrogen (TKN), ammonia as nitrogen, oil and grease, and surfactants (MBAS)
- Pesticides – aldrin, chlordane, 4,4-DDD, 4,4-DDE, 4,4-DDT, dieldrin, endosulfan I, endosulfan II, endosulfan sulfate, endrin, endrin aldehyde, heptachlor epoxide, and methoxychlor
- Fungicides – azoxystrobin*, metalaxyl, chlorothalonil, iprodione, propiconazole, thiophanate-methyl*, vincolozoin, and quintozene
- Herbicides – glyphosate*, prodiamine, pronamide, P-butylfluazifop, fenoxaprop, pendimethalin, triclopyr, chlopyralid, 2,4-D amine, dicamba, and MCPP
- Insecticides – carbaryl*, chlorpyrifos, trichlorfon, and malathion
- Volatile organic compounds (VOCs)** – chloroform, carbon tetrachloride, tetrachloroethylene, trichloroethylene, 1,4-dichlorobenzene, 1,1-dichloroethane, 1,2-dichloroethane, 1,1-dichloroethylene, and vinyl chloride
- Total petroleum hydrocarbons (TPH)** for diesel, heavy hydrocarbons and gasoline

* Sampled during the fourth quarter of 2001 only.
** Sampled in groundwater fourth quarter of 2001, third quarter of 2002, and third and fourth quarters of 2003; sampled in the Tujunga Ponds fourth quarter of 2001; sampled in the Big Tujunga Wash second quarter of 2002, March 2003, and February 2004; and sampled in the Haines Canyon Creek March 2003 and February 2004.

Concentrations of pesticides (including fungicides, herbicides and insecticides) were not detected in any groundwater monitoring wells or surface water samples during any of the sampling events. Except for nitrate, general chemical parameters did not exceed state drinking water standards. Nitrate concentrations above drinking water limits have been detected in two of the groundwater monitoring wells (MW-1 [downgradient] and MW-3 [upgradient]) located on the south side of the golf course site during most sampling events since monitoring began in October 2001 (prior to start of golf course construction). In addition, low levels of two VOCs (chloroform and tetrachloroethylene [PCE]) have been detected at MW-1 and MW-3 since monitoring began.

During the two storm water sampling events conducted in March 2003 and February 2004 in the Haines Canyon Creek and Big Tujunga Wash (surface water samples), concentrations of pesticides, VOCs and TPH-gasoline were not detected. However, concentrations of TPH-

diesel (ranging from 0.14 to 0.51 mg/L) and TPH-heavy hydrocarbons (ranging from 0.14 to 0.63 mg/L) were detected during both sampling events at both sites.

At the locations sampled by the Golf Club, the Haines Canyon Creek and Big Tujunga Wash contain no flows during dry weather conditions, and samples are taken only when flows are present due to storm events. Due to the dilution associated with the storm flows, concentrations of nitrate (as nitrogen) observed in samples from the golf course surface water sampling locations were low (not detected to approximately 0.7 mg/L) compared to the concentrations typically observed at the Haines Canyon Creek sampling location within the Mitigation Bank (approximately 4 to 7 mg/L).

MATERIALS AND METHODS

Sampling Stations

Four sampling locations have been identified for the 5-year monitoring program for the Big Tujunga Wash Mitigation Bank (**Figure 1** and **Table 3**). **Table 4** summarizes sampling conditions observed on the four sampling dates in 2004. The coordinates of the sampling stations were determined by a hand-held Global Positioning System.

Sampling Parameters

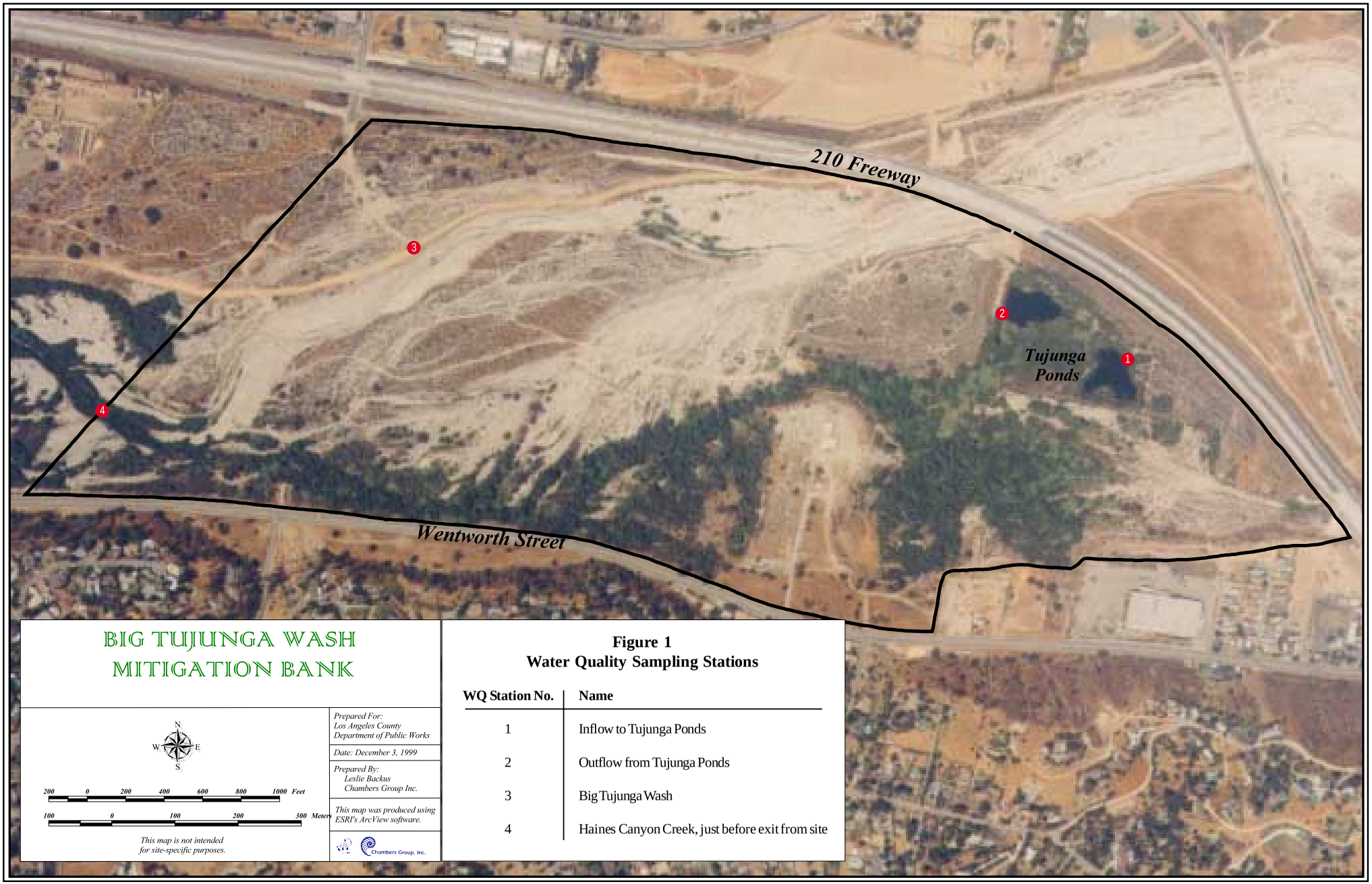
Water Quality. Table 5 summarizes the sampling parameters included in the water quality monitoring program. The following meters were used in the field:

- Dissolved oxygen and temperature – YSI Model 57 (first and second quarters 2004) and HACH SensION 6 DO meter (third and fourth quarters 2004)
- Total residual chlorine – HACH DR 700
- pH – Orion 230A with HACH 51935 electrode

All other analyses were performed in duplicate at MWH 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 the laboratory followed the methods described in the MWH Laboratories *Quality Assurance Manual*.

Table 3
Water Quality Sampling Locations

Sampling Locations	Latitude	Longitude
Haines Canyon Creek, just before exit from site	N 34º 16’ 2.9”	W 118º 21’ 22.2”
Haines Canyon Creek, inflow to Tujunga Ponds	N 34º 16’ 6.9”	W 118º 20’ 18.7”
Haines Canyon Creek, outflow from Tujunga Ponds	N 34º 16’ 7.1”	W 118º 20’ 28.3”
Big Tujunga Wash	N 34º 16’ 11.7”	W 118º 21’ 4.0”



BIG TUJUNGA WASH MITIGATION BANK

N
W E
S

200 0 200 400 600 800 1000 Feet

100 0 100 200 300 Meters

This map is not intended for site-specific purposes.

Prepared For:
Los Angeles County Department of Public Works

Date: December 3, 1999

Prepared By:
Leslie Backus
Chambers Group Inc.

This map was produced using ESRI's ArcView software.

Chambers Group, Inc.

Figure 1
Water Quality Sampling Stations

WQ Station No.	Name
1	Inflow to Tujunga Ponds
2	Outflow from Tujunga Ponds
3	Big Tujunga Wash
4	Haines Canyon Creek, just before exit from site

Table 4
Water Quality Sampling Conditions – 2004

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Date	4/2/2004	7/2/2004	10/5/2004	12/9/2004
Air Temperature	Approx. 70 °F	Approx. 75 °F	Approx. 75 °F	Approx. 70 °F
Skies	Partly cloudy	Clear skies	Clear skies	Clear skies
Water Volume (see also page 21)	Big Tujunga Wash station dry	Big Tujunga Wash station dry	Big Tujunga Wash station dry	Flows observed at all four stations.
Time of Sample				
Haines Canyon Creek Existing the Site	10:20 a.m.	9:15 a.m.	10:00 a.m.	10:40 a.m.
Inflow to Tujunga Ponds	11:20 a.m.	10:30 a.m.	11:00 a.m.	11:50 a.m.
Outflow from Tujunga Ponds	12:17 p.m.	11:30 a.m.	12:00 p.m.	12:30 p.m.
Big Tujunga Wash	Station dry	Station dry	Station dry	1:15 p.m.

Table 5
Water Quality Sampling Parameters

Parameter	Analysis Location	Analytical Method
total Kjeldahl nitrogen (TKN)	laboratory	EPA 351.2
nitrite (NO_2)	laboratory	EPA 300.0 by IC
nitrate (NO_3)	laboratory	EPA 300.0 by IC
ammonia (NH_4)	laboratory	EPA 350.1
orthophosphate - P	laboratory	Standard Methods 4500P-E
total coliform	laboratory	Standard Methods 9221B
fecal coliform	laboratory	Standard Methods 9221C
total organic halogens (organochlorides)	not sampled in 2004	--
total phosphorus - P	laboratory	Standard Methods 4500PE/EPA 365.1
organophosphate (total P minus ortho-P)	calculation	--
turbidity	laboratory	EPA 180.1
glyphosate (Roundup/Rodeo)[1]	laboratory	EPA 547
chlorpyrifos[2]	laboratory	EPA 625
1 golf course fungicide	not sampled in 2004	--
dissolved oxygen	field	Standard Methods 4500-O G
total residual chlorine	field	Standard Methods 4500-Cl D
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 (diazinon/chlorpyrifos by GCMS, EPA 625) tests for the following chemicals: diazinon, sulprofos, chlorpyrifos, demeton, dichlorvos, disulfoton, dimethoate, ethoprop, fenchlorophos, fensulfothion, fenthion, merphos, mevinphos, malathion, parathion-methyl, phorate, tokuthion, tetrachlorovinphos, and trichloronate.

Discharge Measurements. In addition to the water quality monitoring conducted in December 2004, flows in the outlet of Big Tujunga Ponds and Haines Canyon Creek leaving the site were estimated using a simple field procedure. The technique uses a float (a small plastic ball) to measure stream velocity.

Calculating flow then involves solving the following equation:

$$\text{Flow} = ALC / T$$

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 ft)

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 LADPW prior to implementation of the MMP is considered the baseline for water quality conditions at the site. The results of analyses conducted in April 2000 are presented in **Table 6**. Higher bacteria and turbidity observed in the 4/18/00 samples are attributable to a rain event. Phosphorus levels were also high in the 4/18/00 samples, perhaps due to release from sediments.

2004 Results

Water Quality

Results of analyses conducted by MWH Laboratories are appended to this report (**Appendix A**) and summarized in **Table 7** through **Table 10**, and on **Figure 2** through **Figure 7**. Where duplicate analyses were conducted, the average value is graphed. Note that the yields (percent recoveries) of QC samples were at or within acceptable limits (percentages) for all samples. For the second quarter, the holding times for two parameters (orthophosphate - P and turbidity) were exceeded for all samples. Based on regulatory requirements, these holding times are set conservatively short. In the case of orthophosphate, it appears that virtually all of the phosphate is in the ortho form. The analysis for turbidity was performed 2 days past the 48-hour regulatory holding time. However, according to MWH laboratory staff, any degradation that might have taken place in the samples would not be expected to substantially affect the turbidity results.

Table 6
Big Tujunga Wash Mitigation Bank 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	3000	5000	170	1700
		4/18/00	2200	170000	2400	70000
Fecal coliform	MPN/ 100 ml	4/12/00	500	300	40	80
		4/18/00	500	30000	2400	50000
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 7
Summary of Water Quality Results
1st Quarter 2004 (4/2/04)

Parameter	Units	Inflow to Tujunga Ponds 1	Inflow to Tujunga Ponds 2 (duplicate)	Outflow from Tujunga Ponds 1	Outflow from Tujunga Ponds 2 (duplicate)	Big Tujunga Wash 1	Big Tujunga Wash 2 (duplicate)	Haines Cyn Creek exiting site 1	Haines Cyn Creek exiting site 2 (duplicate)
Temperature	°C	17.5	--	17.5	--	*	--	16.0	--
Dissolved Oxygen	mg/L	9.7	--	9.4	--	*	--	9.8	--
pH	std units	7.1	--	7.2	--	*	--	8.2	--
Total residual chlorine	mg/L	ND	--	ND	--	*	--	ND	--
Ammonia-Nitrogen	mg/L	ND	ND	ND	ND	*	*	ND	ND
Kjeldahl Nitrogen	mg/L	ND	ND	ND	ND	*	*	0.35	0.31
Nitrite-Nitrogen	mg/L	ND	ND	ND	ND	*	*	ND	ND
Nitrate-Nitrogen	mg/L	8.5	8.5	6.3	6.3	*	*	3.9	3.9
Orthophosphate-P	mg/L	0.015	0.014	ND	ND	*	*	0.024	0.023
Total phosphorus-P	mg/L	0.03	0.03	ND	0.02	*	*	0.04	0.05
Glyphosate	µg/L	ND	ND	ND	ND	*	*	ND	ND
Turbidity	NTU	0.75	0.80	0.90	0.95	*	*	2.6	2.8
Fecal Coliform Bacteria	MPN/100ml	4	13	70	300	*	*	900	700
Total Coliform Bacteria	MPN/100ml	3,500	3,800	2,200	5,000	*	*	11,000	2,600

NTU nephelometric turbidity units
MPN most probable number
ND non-detect
* no water present

Table 8
Summary of Water Quality Results
2nd Quarter 2004 (7/2/04)

Parameter	Units	Inflow to Tujunga Ponds 1	Inflow to Tujunga Ponds 2 (duplicate)	Outflow from Tujunga Ponds 1	Outflow from Tujunga Ponds 2 (duplicate)	Big Tujunga Wash 1	Big Tujunga Wash 2 (duplicate)	Haines Cyn Creek exiting site 1	Haines Cyn Creek exiting site 2 (duplicate)
Temperature	°C	20.0	--	21.5	--	*	--	19.2	--
Dissolved Oxygen	mg/L	7.7	--	9.5	--	*	--	8.5	--
pH	std units	7.2	--	7.3	--	*	--	8.2	--
Total residual chlorine	mg/L	ND	--	ND	--	*	--	ND	--
Ammonia-Nitrogen	mg/L	ND	ND	ND	ND	*	*	ND	ND
Kjeldahl Nitrogen	mg/L	0.50	0.47	0.67	0.66	*	*	0.26	0.36
Nitrite-Nitrogen	mg/L	0.35	ND	ND	ND	*	*	ND	ND
Nitrate-Nitrogen	mg/L	7.7	7.9	5.9	5.8	*	*	5.3	5.3
Orthophosphate-P	mg/L	0.030	0.034	0.033	0.039	*	*	0.023	0.023
Total phosphorus-P	mg/L	0.02 (MRL 0.02)	0.02 (MRL 0.02)	0.02 (MRL 0.02)	0.03 (MRL 0.02)	*	*	0.02 (MRL 0.02)	0.01 (MRL 0.02)
Glyphosate	µg/L	ND	ND	ND	ND	*	*	ND	ND
Turbidity	NTU	0.35	0.78	0.65	0.85	*	*	0.55	0.50
Fecal Coliform Bacteria	MPN/100ml	50	80	50	80	*	*	70	30
Total Coliform Bacteria	MPN/100ml	13,000	1,700	600	2,200	*	*	2,400	1,100

NTU nephelometric turbidity units
MPN most probable number
MRL method reporting limit
ND non-detect
* no water present

Table 9
Summary of Water Quality Results
3rd Quarter 2004 (10/5/04)

Parameter	Units	Inflow to Tujunga Ponds 1	Inflow to Tujunga Ponds 2 (duplicate)	Outflow from Tujunga Ponds 1	Outflow from Tujunga Ponds 2 (duplicate)	Big Tujunga Wash 1	Big Tujunga Wash 2 (duplicate)	Haines Cyn Creek exiting site 1	Haines Cyn Creek exiting site 2 (duplicate)
Temperature	°C	20.0	--	20.5	--	*	--	17.5	--
Dissolved Oxygen	mg/L	6.2	--	10.5	--	*	--	11.0	--
pH	std units	7.0	--	7.2	--	*	--	8.2	--
Total residual chlorine	mg/L	ND	--	ND	--	*	--	ND	--
Ammonia-Nitrogen	mg/L	ND	ND	ND	ND	*	*	ND	ND
Kjeldahl Nitrogen	mg/L	0.51	0.40	0.34	0.47	*	*	ND	ND
Nitrite-Nitrogen	mg/L	ND	ND	ND	ND	*	*	ND	ND
Nitrate-Nitrogen	mg/L	7.1	7.2	6.0	6.0	*	*	5.3	5.4
Orthophosphate-P	mg/L	0.014	0.015	ND	ND	*	*	0.019	0.019
Total phosphorus-P	mg/L	0.025	0.051	ND	0.026	*	*	ND	0.020
Glyphosate	µg/L	ND	ND	ND	ND	*	*	ND	ND
Turbidity	NTU	3.2	5.4	1.2	1.6	*	*	0.55	0.50
Fecal Coliform Bacteria	MPN/100ml	21	8	7	8	*	*	220	130
Total Coliform Bacteria	MPN/100ml	300,000	4,600	30,000	90,000	*	*	3,000	700

-- No duplicate samples are taken for field measurements.
NTU nephelometric turbidity units
MPN most probable number
ND non-detect
* no water present

Table 10
Summary of Water Quality Results
4th Quarter 2004 (12/9/04)

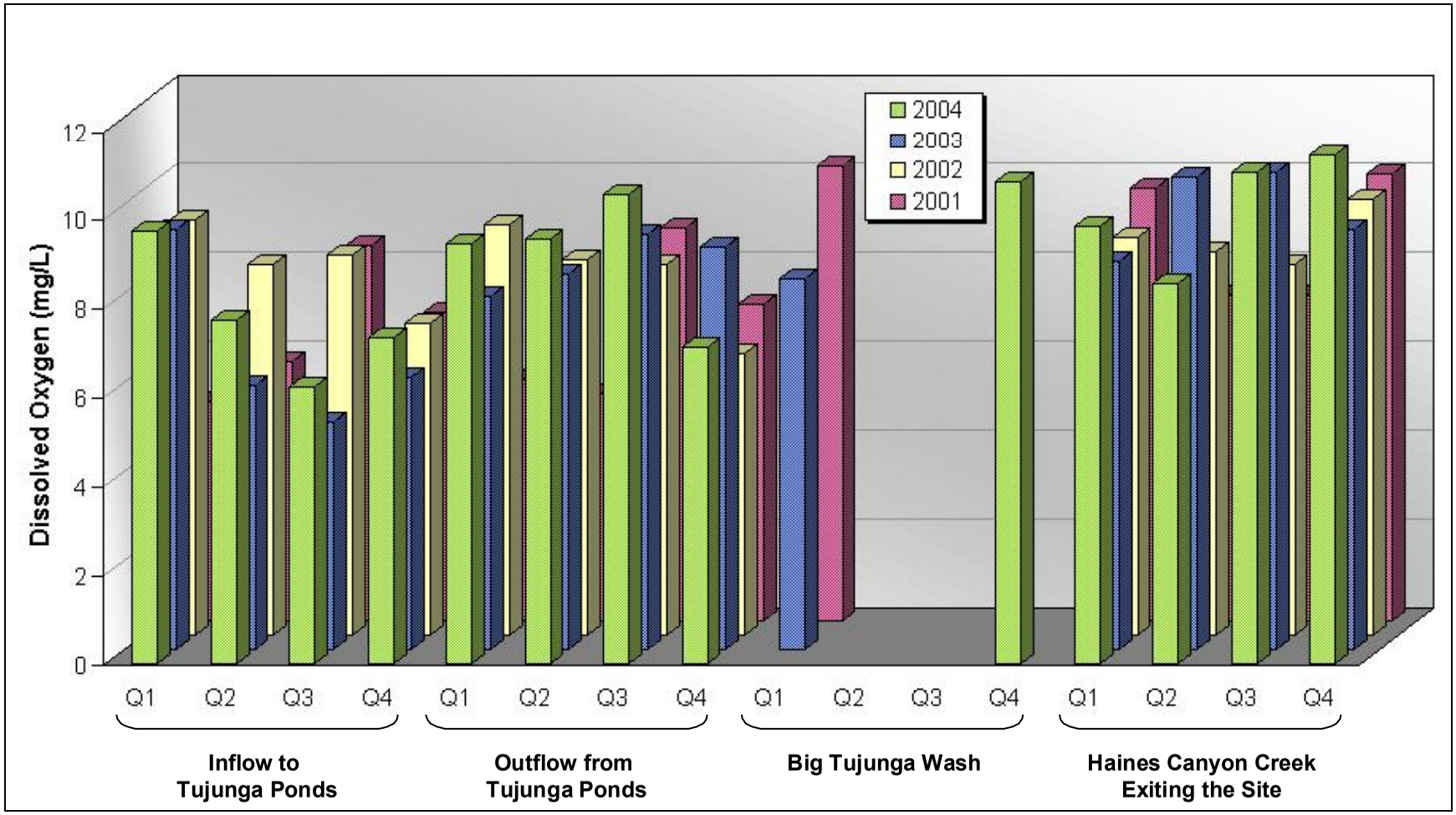
Parameter	Units	Inflow to Tujunga Ponds 1	Inflow to Tujunga Ponds 2 (duplicate)	Outflow from Tujunga Ponds 1	Outflow from Tujunga Ponds 2 (duplicate)	Big Tujunga Wash 1	Big Tujunga Wash 2 (duplicate)	Haines Cyn Creek exiting site 1	Haines Cyn Creek exiting site 2 (duplicate)
Temperature	°C	17.7	--	16.3	--	16.3	--	13.0	--
Dissolved Oxygen	mg/L	7.3	--	7.1	--	10.8	--	11.4	--
pH	std units	6.8	--	6.7	--	8.8	--	8.4	--
Total residual chlorine	mg/L	ND	--	ND	--	ND	--	ND	--
Ammonia-Nitrogen	mg/L	ND	ND	ND	ND	ND	ND	ND	ND
Kjeldahl Nitrogen	mg/L	ND	ND	ND	ND	0.24	ND	ND	ND
Nitrite-Nitrogen	mg/L	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate-Nitrogen	mg/L	9.0	9.1	7.3	7.2	ND	ND	3.0	2.9
Orthophosphate-P	mg/L	0.035	0.039	0.029	0.029	ND	ND	0.010	0.010
Total phosphorus-P	mg/L	0.064	0.060	0.065	0.028	0.035	0.038	0.025	0.015
Glyphosate	µg/L	ND	ND	ND	ND	ND	ND	ND	ND
Chloropyrifos*	ng/L	ND	ND	ND	ND	ND	ND	ND	ND
Turbidity	NTU	1.3	0.25	0.20	0.20	0.45	0.40	0.35	0.45
Fecal Coliform Bacteria	MPN/100ml	4	8	9	4	ND	ND	110	23
Total Coliform Bacteria	MPN/100ml	1,600	170	1,400	50	50	130	700	900

-- No duplicate samples are taken for field measurements.

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

* The analytical method used for chloropyrifos (diazinon/chlorpyrifos by GCMS, EPA 625) also tests for the following chemicals: diazinon, sulprofos, demeton, dichlorvos, disulfoton, dimethoate, ethoprop, fenchlorophos, fensulfothion, fenthion, merphos, mevinphos, malathion, parathion-methyl, phorate, tokuthion, tetrachlorovinphos, and trichloronate. Samples for this quarter were all non-detect for these EPA 625 parameters.

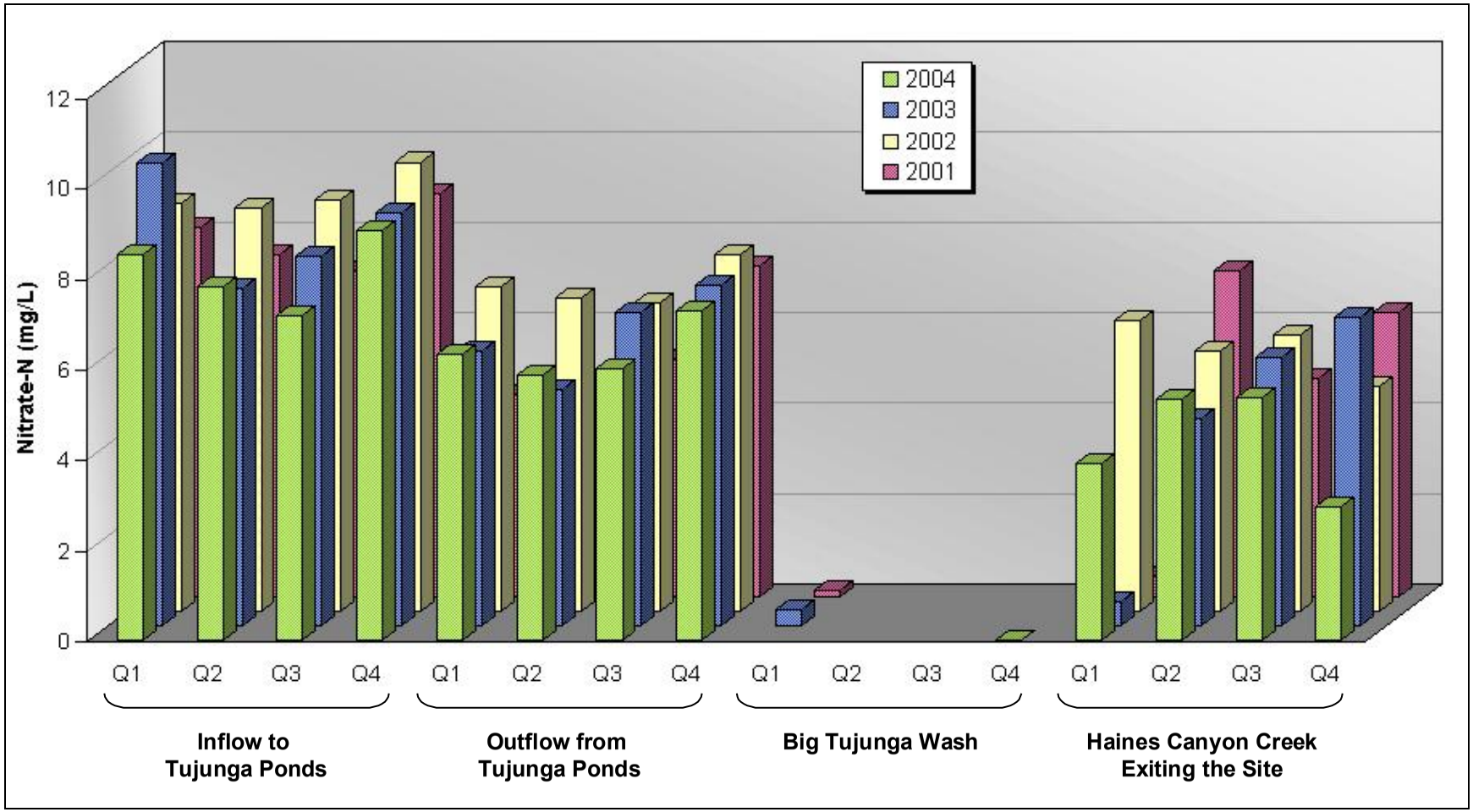
Figure 2
Dissolved Oxygen – 2001, 2002, 2003, and 2004



Notes:

- Flows observed in Big Tujunga Wash only in the first quarters of 2001 and 2003 and in the fourth quarter of 2004.
- The Basin Plan objective and EPA criterion for minimum dissolved oxygen level (warmwater fish species) is 5 mg/L (see **Table 12**).

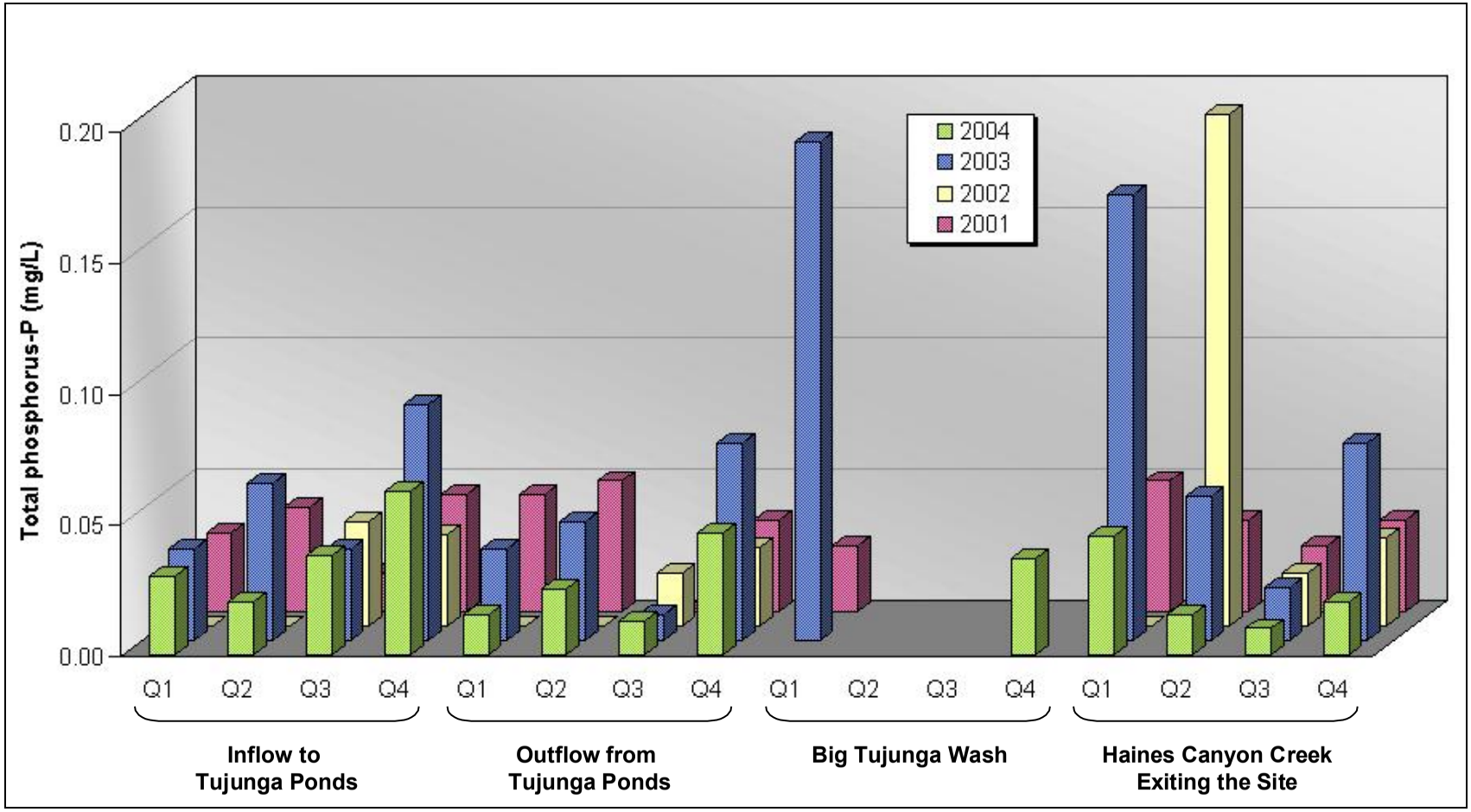
Figure 3
Nitrate as Nitrogen – 2001, 2002, 2003, and 2004



Notes:

- Flows observed in Big Tujunga Wash only in the first quarters of 2001 and 2003 and in the fourth quarter of 2004.
- Each bar represents the average value of the duplicate samples taken on each date.
- The Basin Plan objective for nitrate-nitrogen is 10 mg/L (see **Table 12**).

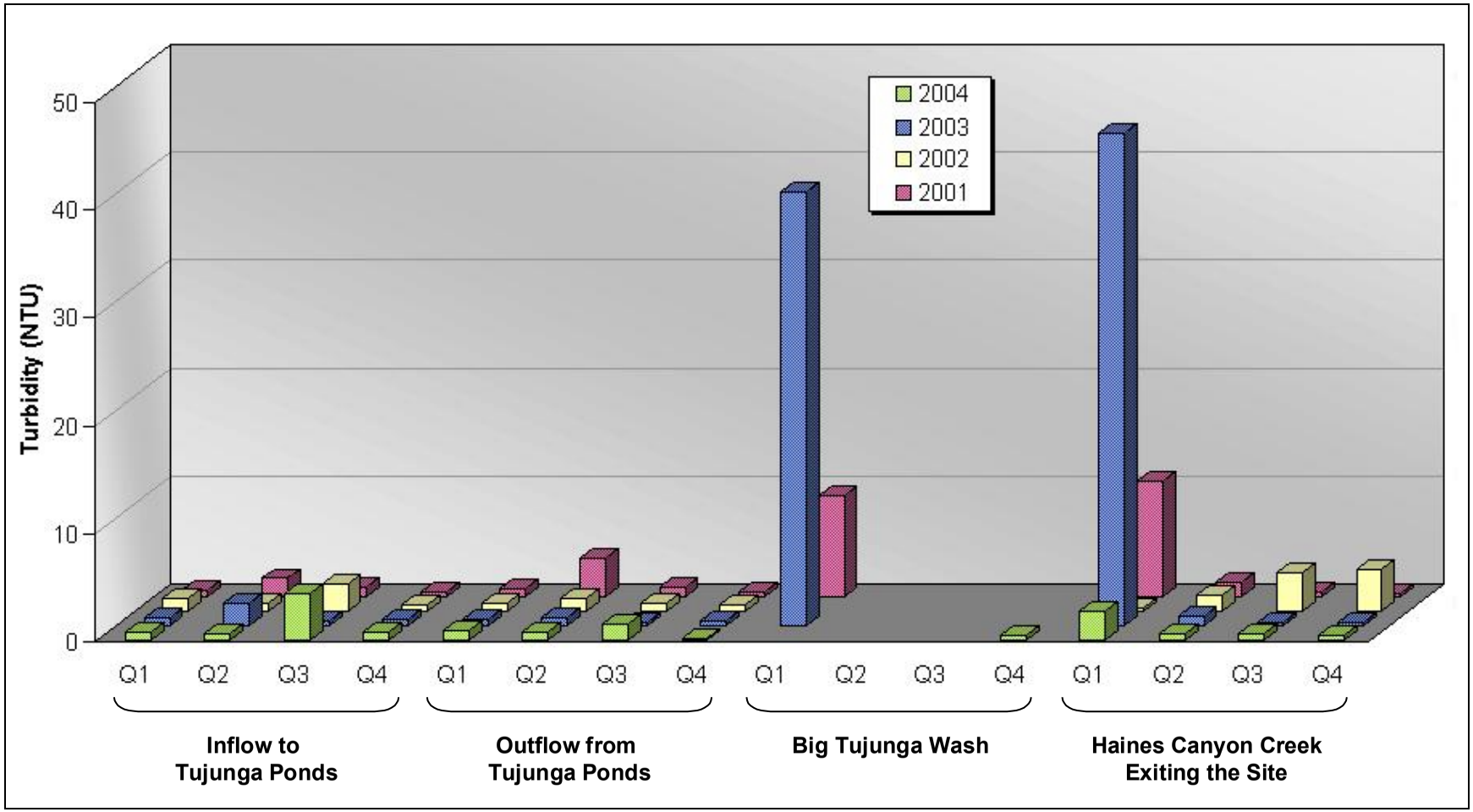
Figure 4
Total Phosphorus – 2001, 2002, 2003, and 2004



Notes:

- Flows observed in Big Tujunga Wash only in the first quarters of 2001 and 2003 and in the fourth quarter of 2004.
- Each bar represents the average value of the duplicate samples taken on each date.
- EPA's recommended range for streams to prevent excess algae growth is <0.05 – 0.1 mg/L (see **Table 12**).

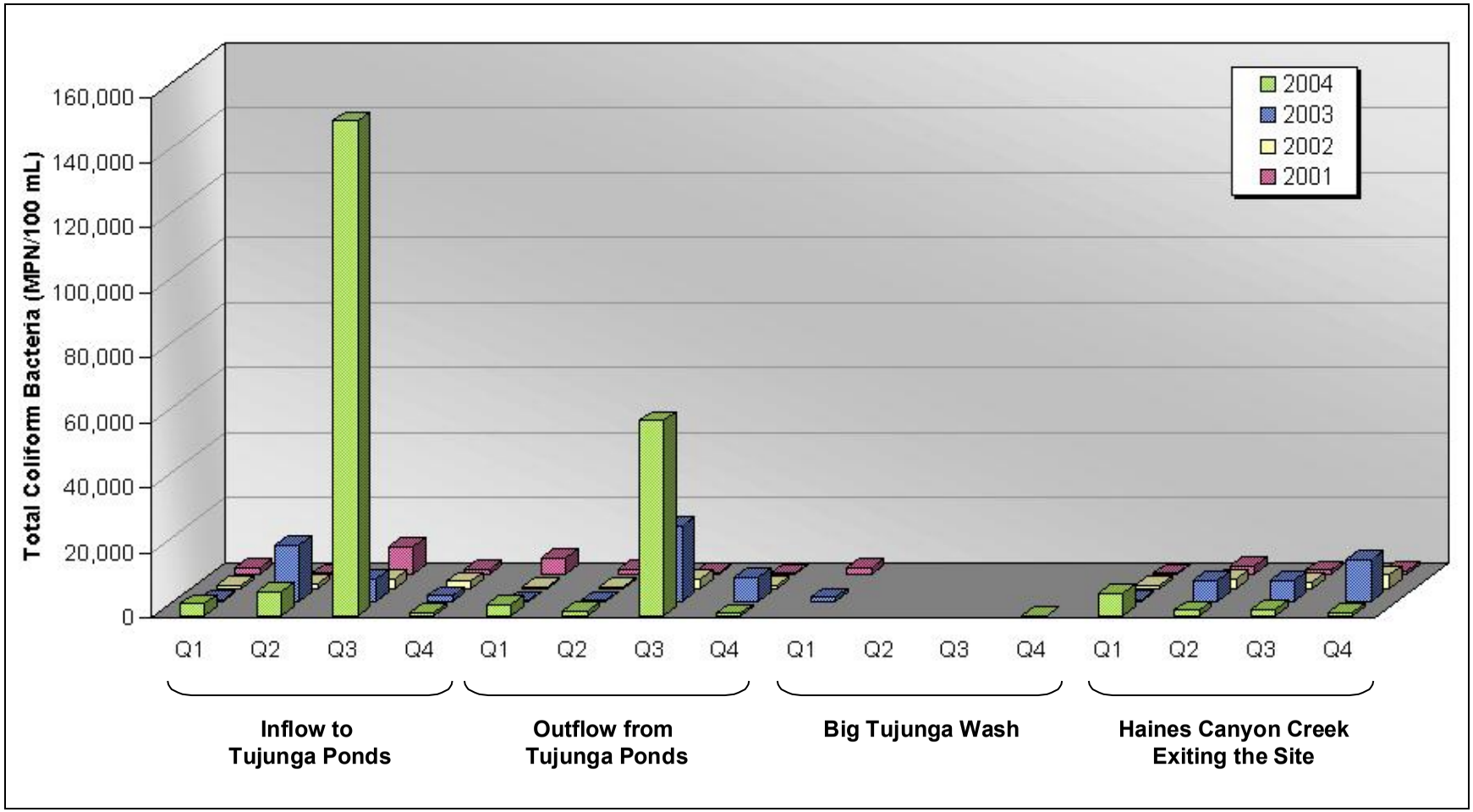
Figure 5
Turbidity – 2001, 2002, 2003, and 2004



Notes:

- Flows observed in Big Tujunga Wash only in the first quarters of 2001 and 2003 and in the fourth quarter of 2004.
- Each bar represents the average value of the duplicate samples taken on each date.
- Secondary drinking water standard for turbidity is 5 NTU (see **Table 12**).

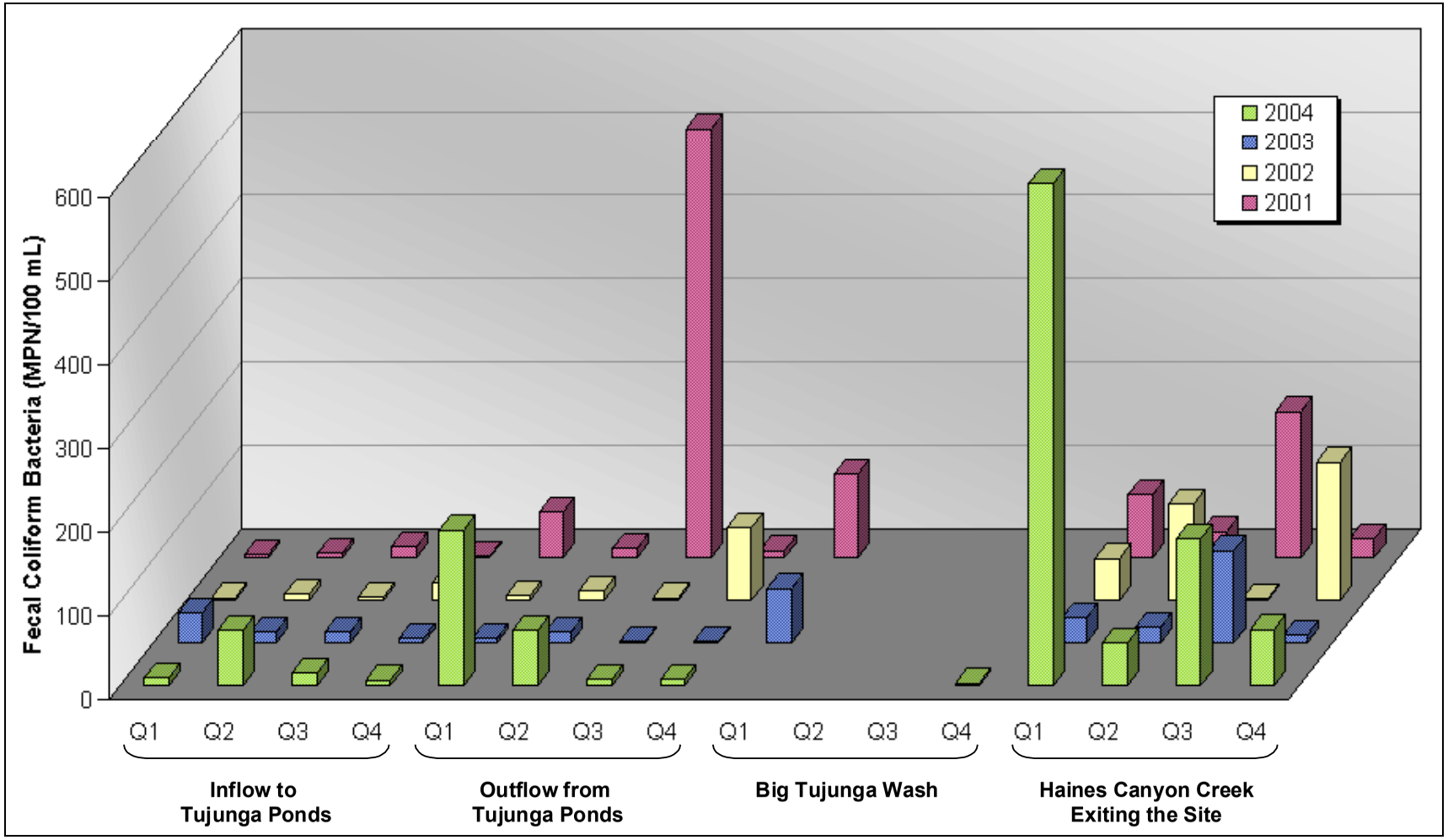
Figure 6
Total Coliform Bacteria – 2001, 2002, 2003, and 2004



Notes:

- Flows observed in Big Tujunga Wash only in the first quarters of 2001 and 2003 and in the fourth quarter of 2004.
- Each bar represents the average value of the duplicate samples taken on each date.
- There are no numeric or narrative standard for total coliform.

Figure 7
Fecal Coliform Bacteria – 2001, 2002, 2003, and 2004



Notes:

- Flows observed in Big Tujunga Wash only in the first quarters of 2001 and 2003 and in the fourth quarter of 2004.
- Each bar represents the average value of the duplicate samples taken on each date.
- The Basin Plan water contact recreation standard for fecal coliform is 200 MPN/100 mL (see **Table 12**).

Discharge Measurements

Using the field technique described above, flows in the outlet from Big Tujunga Ponds, in Haines Canyon Creek leaving the site, and in Big Tujunga Wash (December sampling date only) were approximated. Estimated flows for the four sampling dates in 2004 are summarized in **Table 11**.

Table 11
Estimated Flows for 2004

	Flow (cubic feet per second)		
Sampling Date	**Outlet of Big Tujunga Ponds**	**Haines Canyon Creek leaving the site**	**Big Tujunga Wash**
4/2/2004	3.8	6.5	*
7/2/2004	2.8	3.2	*
10/5/2004	2.0	1.4	*
12/9/2004	2.8	12.0	2.8

* No water present

Comparison of Results with Baseline Data

Water quality in December 2004 was similar to baseline conditions for most parameters. Higher bacteria and turbidity observed in the 4/18/00 samples are attributable to a rain event. Phosphorus levels were also higher in the April 2000 samples than in December 2004, perhaps due to release from sediments. Nitrate and pH conditions in Haines Canyon Creek leaving the site were similar to the 4/12/00 samples and higher than the 4/18/00 samples since stormflows were present in Big Tujunga Wash on 4/18/00.

Comparison of Results with Aquatic Life Criteria

Tables 7 and **11** present objectives established by the Los Angeles Regional Water Quality Control Board (Regional Board) for protection of beneficial uses in Big Tujunga Wash including wildlife habitat. EPA's criteria for freshwater aquatic life are also presented in **Tables 7, 8, 9, 10** and **12**.

Table 12
National and Local Recommended Water Quality Criteria - Freshwaters

Parameter	Basin Plan Objectives[a]	EPA Criteria		
		CMC	CCC	Human Health
Temperature (°C)	b	See Table 15	See Table 15	--
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)	200[f] (water contact recreation)	--	--	Swimming stds: 33[g] (geometric mean for enterococci) 126[g] (geometric mean for *E. coli*)
Ammonia-nitrogen (mg/L)	See Table 16	See Tables 12, 13, and 14	See Tables 12, 13, and 14	--
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)

Table 12 - Footnotes

-- 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).

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 Standard based on a minimum of not less than four samples for any 30-day period, 10% of total samples during any 30-day period shall not exceed 400/100ml.

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 13
Numeric Values of the Criterion Maximum Concentration (CMC) with Salmonids Present and Absent and the Criterion Continuous Concentration (CCC) for Ammonia Nitrogen (mg/L)

pH	CMC with Salmonids Present	CMC with Salmonids Absent	CCC
6.5	32.6	48.8	3.48
6.6	31.3	46.8	3.42
6.7	29.8	44.6	3.36
6.8	28.1	42.0	3.28
6.9	26.2	39.1	3.19
7.0	24.1	36.1	3.08
7.1	22.0	32.8	2.96
7.2	19.7	29.5	2.81
7.3	17.5	26.2	2.65
7.4	15.4	23.0	2.47
7.5	13.3	19.9	2.28
7.6	11.4	17.0	2.07
7.7	9.65	14.4	1.87
7.8	8.11	12.1	1.66
7.9	6.77	10.1	1.46
8.0	5.62	8.4	1.27
8.1	4.64	6.95	1.09
8.2	3.83	5.72	0.935
8.3	3.15	4.71	0.795
8.4	2.59	3.88	0.673
8.5	2.14	3.2	0.568
8.6	1.77	2.65	0.480
8.7	1.47	2.2	0.406
8.8	1.23	1.84	0.345
8.9	1.04	1.56	0.295
9.0	0.885	1.32	0.254

Source: USEPA. 1999. 1999 Update of Ambient Water Quality Criteria for Ammonia. EPA 822-R-99-014. Washington, D.C.

Table 14
Temperature and pH-Dependent Values of the Ammonia-Nitrogen CCC (Chronic Criterion) for Fish Early Life Stages Absent

CCC for Fish Early Life Stages Absent, mg N/L										
	Temperature (°Celsius)									
pH	0-7	8	9	10	11	12	13	14	15*	16*
6.5	10.8	10.1	9.51	8.92	8.36	7.84	7.35	6.89	6.46	6.06
6.6	10.7	9.99	9.37	8.79	8.24	7.72	7.24	6.79	6.36	5.97
6.7	10.5	9.81	9.20	8.62	8.08	7.58	7.11	6.66	6.25	5.86
6.8	10.2	9.58	8.98	8.42	7.90	7.40	6.94	6.51	6.10	5.72
6.9	9.93	9.31	8.73	8.19	7.68	7.20	6.75	6.33	5.93	5.56
7.0	9.60	9.00	8.43	7.91	7.41	6.95	6.52	6.11	5.73	5.37
7.1	9.20	8.63	8.09	7.58	7.11	6.67	6.25	5.86	5.49	5.15
7.2	8.75	8.20	7.69	7.21	6.76	6.34	5.94	5.57	5.22	4.90
7.3	8.24	7.73	7.25	6.79	6.37	5.97	5.60	5.25	4.92	4.61
7.4	7.69	7.21	6.76	6.33	5.94	5.57	5.22	4.89	4.59	4.30
7.5	7.09	6.64	6.23	5.84	5.48	5.13	4.81	4.51	4.23	3.97
7.6	6.46	6.05	5.67	5.32	4.99	4.68	4.38	4.11	3.85	3.61
7.7	5.81	5.45	5.11	4.79	4.49	4.21	3.95	3.70	3.47	3.25
7.8	5.17	4.84	4.54	4.26	3.99	3.74	3.51	3.29	3.09	2.89
7.9	4.54	4.26	3.99	3.74	3.51	3.29	3.09	2.89	2.71	2.54
8.0	3.95	3.70	3.47	3.26	3.05	2.86	2.68	2.52	2.36	2.21
8.1	3.41	3.19	2.99	2.81	2.63	2.47	2.31	2.17	2.03	1.91
8.2	2.91	2.73	2.56	2.40	2.25	2.11	1.98	1.85	1.74	1.63
8.3	2.47	2.32	2.18	2.04	1.91	1.79	1.68	1.58	1.48	1.39
8.4	2.09	1.96	1.84	1.73	1.62	1.52	1.42	1.33	1.25	1.17
8.5	1.77	1.66	1.55	1.46	1.37	1.28	1.20	1.13	1.06	0.990
8.6	1.49	1.40	1.31	1.23	1.15	1.08	1.01	0.951	0.892	0.836
8.7	1.26	1.18	1.11	1.04	0.976	0.915	0.858	0.805	0.754	0.707
8.8	1.07	1.01	0.944	0.885	0.829	0.778	0.729	0.684	0.641	0.601
8.9	0.917	0.860	0.806	0.756	0.709	0.664	0.623	0.584	0.548	0.513
9.0	0.790	0.740	0.694	0.651	0.610	0.572	0.536	0.503	0.471	0.442

* At 15° C and above, the criterion for fish ELS absent is the same as the criterion for fish ELS present.

Source: USEPA. 1999. 1999 Update of Ambient Water Quality Criteria for Ammonia. EPA 822-R-99-014. Washington, D.C.

Table 15
Temperature and pH-Dependent Values of the Ammonia-Nitrogen CCC (Chronic Criterion) for Fish Early Life Stages Present

CCC for Fish Early Life Stages Present, mg N/L										
pH	Temperature (° Celsius)									
	0	14	16	18	20	22	24	26	28	30
6.5	6.67	6.67	6.06	5.33	4.68	4.12	3.62	3.18	2.80	2.46
6.6	6.57	6.57	5.97	5.25	4.61	4.05	3.56	3.13	2.75	2.42
6.7	6.44	6.44	5.86	5.15	4.52	3.98	3.50	3.07	2.70	2.37
6.8	6.29	6.29	5.72	5.03	4.42	3.89	3.42	3.00	2.64	2.32
6.9	6.12	6.12	5.56	4.89	4.30	3.78	3.32	2.92	2.57	2.25
7.0	5.91	5.91	5.37	4.72	4.15	3.65	3.21	2.82	2.48	2.18
7.1	5.67	5.67	5.15	4.53	3.98	3.50	3.08	2.70	2.38	2.09
7.2	5.39	5.39	4.90	4.31	3.78	3.33	2.92	2.57	2.26	1.99
7.3	5.08	5.08	4.61	4.06	3.57	3.13	2.76	2.42	2.13	1.87
7.4	4.73	4.73	4.30	3.78	3.32	2.92	2.57	2.26	1.98	1.74
7.5	4.36	4.36	3.97	3.49	3.06	2.69	2.37	2.08	1.83	1.61
7.6	3.98	3.98	3.61	3.18	2.79	2.45	2.16	1.90	1.67	1.47
7.7	3.58	3.58	3.25	2.86	2.51	2.21	1.94	1.71	1.50	1.32
7.8	3.18	3.18	2.89	2.54	2.23	1.96	1.73	1.52	1.33	1.17
7.9	2.80	2.80	2.54	2.24	1.96	1.73	1.52	1.33	1.17	1.03
8.0	2.43	2.43	2.21	1.94	1.71	1.50	1.32	1.16	1.02	0.897
8.1	2.10	2.10	1.91	1.68	1.47	1.29	1.14	1.00	0.879	0.773
8.2	1.79	1.79	1.63	1.43	1.26	1.11	0.973	0.855	0.752	0.661
8.3	1.52	1.52	1.39	1.22	1.07	0.941	0.827	0.727	0.639	0.562
8.4	1.29	1.29	1.17	1.03	0.906	0.796	0.700	0.615	0.541	0.475
8.5	1.09	1.09	0.990	0.870	0.765	0.672	0.591	0.520	0.457	0.401
8.6	0.920	0.920	0.836	0.735	0.646	0.568	0.499	0.439	0.386	0.339
8.7	0.778	0.778	0.707	0.622	0.547	0.480	0.422	0.371	0.326	0.287
8.8	0.661	0.661	0.601	0.528	0.464	0.408	0.359	0.315	0.277	0.244
8.9	0.565	0.565	0.513	0.451	0.397	0.349	0.306	0.269	0.237	0.208
9.0	0.486	0.486	0.442	0.389	0.342	0.300	0.264	0.232	0.204	0.179

Source: USEPA. 1999. 1999 Update of Ambient Water Quality Criteria for Ammonia. EPA 822-R-99-014. Washington, D.C.

Table 16
Maximum One-Hour Average Concentration for Total Ammonia (mg/L NH_3)

pH	Temperature (°Celsius)						
	0	5	10	15	20	25	30
6.50	35	33	31	30	29	20	14.3
6.75	32	30	28	27	27	18.6	13.2
7.00	28	26	25	24	23	16.4	11.6
7.25	23	22	20	19.7	19.2	13.4	9.5
7.50	17.4	16.3	15.5	14.9	14.6	10.2	7.3
7.75	12.2	11.4	10.9	10.5	10.3	7.2	5.2
8.00	8.0	7.5	7.1	6.9	6.8	4.8	3.5
8.25	4.5	4.2	4.1	4.0	3.9	2.8	2.1
8.50	2.6	2.4	2.3	2.3	2.3	1.71	1.28
8.75	1.47	1.40	1.37	1.38	1.42	1.07	0.83
9.00	0.86	0.83	0.83	0.86	0.91	0.72	0.58

Source: California Regional Water Quality Control Board, Los Angeles Region. 1994. Water Quality Control Plan (Basin Plan). Taken from USEPA. 1986. Quality Criteria for Water. EPA 440/5-86-001. Washington, D.C.

Table 17
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 four quarters of sampling in 2004 are discussed by parameter in **Table 18**.

Table 18
Discussion of 2004 Sampling Results

Parameter	Discussion
Temperature	• As with all preceding years, observed temperatures were below levels of concern for growth and survival of warmwater fish species. • Temperatures in Haines Canyon Creek leaving the site were generally cooler (up to 5 °C) than temperatures in the Tujunga Ponds. • Seasonal fluctuations of up to 6 °C were observed. December readings were the lowest, and July readings were highest.
Dissolved oxygen	• All DO readings in 2004 were above the recommended minimum for warmwater fish species of 5.0 mg/L. During the past four monitoring years, only one DO reading below 5.0 mg/L has been recorded (in the inflow to the ponds in March 2001). • Seasonal fluctuations of up to 3.5 mg/L in DO were observed. Highest overall readings were observed in the coolest sampling period (fourth quarter, December).
pH	• Except at Big Tujunga Wash in December (8.8 units), the pH values of water from all stations in 2004 were within the 6.5 to 8.5 range identified in the Basin Plan. • In general, pH values observed in Haines Canyon Creek leaving the site were approximately 1 to 2 units higher than values observed in the ponds. This pattern has been observed in all four monitoring years. • For any given sampling date in 2004, the pH of waters flowing into and out of the ponds varied by 0.2 units or less. • The maximum seasonal pH fluctuation at any station in 2004 was 0.6 units.
Total residual chlorine	• As in all preceding years, residual chlorine was not detected in any samples.
Nitrogen	• All nitrate-nitrogen readings were below the drinking water standard of 10 mg/L. • Ammonia-nitrogen and nitrite-nitrogen were not detected in samples during 2004 except for one sample at the inflow to Tujunga Ponds in July (0.35 mg/L). • Kjeldahl nitrogen (organic nitrogen plus ammonia) readings were consistently low (<1 mg/L) at all stations on all dates. • Nitrate-nitrogen was consistently higher in waters flowing into the ponds than the outflow (up to 2.2 mg/L difference). Nitrate in Haines Canyon Creek was consistently lower than values observed in the ponds (up to 6 mg/L difference).

Table 18 (Continued)
Discussion of 2004 Sampling Results

Parameter	Discussion
Phosphorus	• Total phosphorus values at all stations for all four quarters of 2004 were below EPA's recommendation for streams of <0.05 – 0.1 mg/L total phosphates. • The proportion of total phosphorus present as reactive orthophosphate ranged from approximately 29 percent to 100 percent. • Baseline total phosphorus observed in April 2000 was significantly higher than most 2001, 2002, 2003 and 2004 readings (up to 0.211 mg/L in April 2000). This may be attributable to releases from sediment disturbances caused by a rain event in 2000 and/or input from stormflows. Higher readings (over 0.10 mg/L) were observed in two samples in 2003 and one sample in 2002, which generally corresponded with periods of higher turbidity. Readings over 0.10 mg/L were not observed in 2004.
Glyphosate	• Glyphosate was added to the list of sampling parameters starting in the first quarter of 2004. Glyphosate readings on all sampling dates were below the detection limit.
Chloropyrifos	• Chloropyrifos was added to the list of sampling parameters in the fourth quarter of 2004. Chloropyrifos and the other pesticides tested using EPA's analytical method 625 were not detected at any station in the fourth quarter of 2004. Similarly, sampling conducted at the upstream golf course did not detect chloropyrifos in surface or ground waters.
Turbidity	• Turbidity values in 2004 were similar to those of 2001, 2002 and 2003, and were below the secondary drinking water standard of 5 NTU except for one sample in the Inflow to Tujunga Ponds in October (5.4 NTU; the duplicate for this sample was 3.2 NTU).
Bacteria	• In the inflow to Tujunga Ponds, fecal coliform levels were below the water contact recreation standard of 200 MPN/100 mL for all four quarters. In the outflow from Tujunga Ponds, fecal coliform levels were below the standard for all four quarters except for one duplicate sample in the first quarter (300 MPN/100 mL). In Haines Canyon Creek, fecal coliform levels were below the standard for the second and fourth quarters; both duplicate samples in the first quarter (900 and 700 MPN/100 mL) and one duplicate sample in the third quarter (220 MPN/100 mL) exceeded the standard. [Note, the 200 MPN/mL standard is used for reference only. Sufficient samples were not taken as part of this program since the standard calls for not less than four samples for any 30-day period.] • Fecal coliform levels in 2004 ranged from not detected to 900 MPN/100 mL. Total coliforms were much higher – estimated levels in one sample in the third quarter of 2004 was 300,000 MPN/100 mL (although the duplicate for this sample was estimated at 4,600 MPN/100 mL).

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.

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.

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 BANK
WATER QUALITY MONITORING PROGRAM

LABORATORY RESULTS

BIG TUJUNGA WASH MITIGATION BANK
WATER QUALITY MONITORING PROGRAM

APRIL 2004 LABORATORY RESULTS

MWH Laboratories
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Laboratory Report

for

Applied Research Dept, MWH (Darren Giles)
327 West Maple Avenue

Monrovia , CA 91016

Attention: Darren Giles
Fax: (626) 359-3593

DATE OF ISSUE
APR 15 2004
MWH LABORATORIES

JCH Jim Hein
Project Manager

ACCREDITED IN ACCORDANCE WITH nelac 01114CA

Report#: 124548
BIG-TJ

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments,QC Report,QC Summary,Data Report,Hits Report, totaling 12 page[s].

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Applied Research Dept, MWH (Darren Giles)
327 West Maple Avenue
Monrovia, CA 91016
Attn: Darren Giles
Phone: (626) 303-5945

Customer Code: ARD-DG
PO#: 1341915.5620.041801
Group#: 124548
Project#: BIG-TJ
Proj Mgr: James Hein
Phone: (626) 386-1189

The following samples were received from you on **04/02/04**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Matrix	Sample Date	Tests Scheduled
2404020222	SITE 1 INFLOW TO TJ POND 1	Water	02-apr-2004 11:20:00	FECCOL GLYPHOS NH3 NO2-N NO3 OPO4 T-P TKN TOTCOL TURB
2404020223	SITE 1 INFLOW TO TJ POND 2	Water	02-apr-2004 11:28:00	FECCOL GLYPHOS NH3 NO2-N NO3 OPO4 T-P TKN TOTCOL TURB
2404020224	SITE 2 OUTFLOW FROM TJ POND 1	Water	02-apr-2004 12:17:00	FECCOL GLYPHOS NH3 NO2-N NO3 OPO4 T-P TKN TOTCOL TURB
2404020225	SITE 2 OUTFLOW FROM TJ POND 2	Water	02-apr-2004 12:23:00	FECCOL GLYPHOS NH3 NO2-N NO3 OPO4 T-P TKN TOTCOL TURB
2404020226	SITE 4 HAINES CANYON CREEK 1	Water	02-apr-2004 10:20:00	FECCOL GLYPHOS NH3 NO2-N NO3 OPO4 T-P TKN TOTCOL TURB
2404020227	SITE 4 HAINES CANYON CREEK 2	Water	02-apr-2004 10:30:00	FECCOL GLYPHOS NH3 NO2-N NO3 OPO4 T-P TKN TOTCOL TURB

Test Acronym Description

Test Acronym	Description
FECCOL	Fecal Coliform Bacteria
GLYPHOS	Glyphosate
NH3	Ammonia Nitrogen
NO2-N	Nitrite, Nitrogen by IC
NO3	Nitrate as Nitrogen by IC
OPO4	Orthophosphate-P
T-P	Total phosphorus-P
TKN	Kjeldahl Nitrogen
TOTCOL	Total Coliform Bacteria
TURB	Turbidity

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Report
Comments
#124548

(QC Ref#: 227131)
Test: Nitrite, Nitrogen by IC (ML/EPA 300.0)
QC Type: LCS1
Recovery is within the Method QC limit.

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Laboratory
Hits Report
#124548

Applied Research Dept, MWH (Darren Giles)
Darren Giles
327 West Maple Avenue
Monrovia , CA 91016

Samples Received
02-apr-2004 17:17:30

Analyzed	Sample#	Sample ID	Result	UNITS	MRL
	2404020222	**SITE 1 INFLOW TO TJ POND 1**			
04/02/04		Fecal Coliform Bacteria	4	MPN/100 mL	2.000
04/02/04		Nitrate as Nitrogen by IC	8.5	mg/l	.100
04/02/04		Orthophosphate-P	0.015	mg/l	.010
04/02/04		Total Coliform Bacteria	3500	MPN/100 mL	2.000
04/07/04		Total phosphorus-P	0.03	mg/l	.010
04/02/04		Turbidity	0.75	NTU	.050
	2404020223	**SITE 1 INFLOW TO TJ POND 2**			
04/02/04		Fecal Coliform Bacteria	13	MPN/100 mL	2.000
04/02/04		Nitrate as Nitrogen by IC	8.5	mg/l	.100
04/02/04		Orthophosphate-P	0.014	mg/l	.010
04/02/04		Total Coliform Bacteria	3800	MPN/100 mL	2.000
04/07/04		Total phosphorus-P	0.03	mg/l	.010
04/02/04		Turbidity	0.80	NTU	.050
	2404020224	**SITE 2 OUTFLOW FROM TJ POND 1**			
04/02/04		Fecal Coliform Bacteria	70	MPN/100 mL	2.000
04/02/04		Nitrate as Nitrogen by IC	6.3	mg/l	.100
04/02/04		Total Coliform Bacteria	2200	MPN/100 mL	2.000
04/02/04		Turbidity	0.90	NTU	.050
	2404020225	**SITE 2 OUTFLOW FROM TJ POND 2**			
04/02/04		Fecal Coliform Bacteria	300	MPN/100 mL	2.000
04/02/04		Nitrate as Nitrogen by IC	6.3	mg/l	.100
04/02/04		Total Coliform Bacteria	5000	MPN/100 mL	2.000
04/07/04		Total phosphorus-P	0.02	mg/l	.010
04/02/04		Turbidity	0.95	NTU	.050

SUMMARY OF POSITIVE DATA ONLY.

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Laboratory
Hits Report
#124548

Applied Research Dept, MWH (Darren Giles)
Darren Giles
327 West Maple Avenue
Monrovia , CA 91016

Samples Received
02-apr-2004 17:17:30

Analyzed	Sample#	Sample ID	Result	UNITS	MRL
	2404020225	**SITE 2 OUTFLOW FROM TJ POND 2**			
	2404020226	**SITE 4 HAINES CANYON CREEK 1**			
04/02/04		Fecal Coliform Bacteria	900	MPN/100 mL	2.000
04/09/04		Kjeldahl Nitrogen	0.35	mg/l	.200
04/02/04		Nitrate as Nitrogen by IC	3.9	mg/l	.100
04/02/04		Orthophosphate-P	0.024	mg/l	.010
04/02/04		Total Coliform Bacteria	11000	MPN/100 mL	2.000
04/07/04		Total phosphorus-P	0.04	mg/l	.010
04/02/04		Turbidity	2.6	NTU	.050
	2404020227	**SITE 4 HAINES CANYON CREEK 2**			
04/02/04		Fecal Coliform Bacteria	700	MPN/100 mL	2.000
04/09/04		Kjeldahl Nitrogen	0.31	mg/l	.200
04/02/04		Nitrate as Nitrogen by IC	3.9	mg/l	.100
04/02/04		Orthophosphate-P	0.023	mg/l	.010
04/02/04		Total Coliform Bacteria	2600	MPN/100 mL	2.000
04/07/04		Total phosphorus-P	0.05	mg/l	.010
04/02/04		Turbidity	2.8	NTU	.050

SUMMARY OF POSITIVE DATA ONLY.

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Laboratory
Data Report
#124548

Applied Research Dept, MWH (Darren Giles)
Darren Giles
327 West Maple Avenue
Monrovia , CA 91016

Samples Received
04/02/04

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
SITE 1 INFLOW TO TJ POND 1 (2404020222) Sampled on 04/02/04 11:20								
	04/02/04 14:12		(ML/SM9221C)	Fecal Coliform Bacteria	4	MPNM	2.0	1
	04/06/04 00:00	227367	(ML/EPA 547)	Glyphosate	ND	ug/l	6.0	1
	04/09/04 00:00	227755	(ML/EPA 350.1)	Ammonia Nitrogen	ND	mg/l	0.050	1
	04/02/04 14:29	227131	(ML/EPA 300.0)	Nitrite, Nitrogen by IC	ND	mg/l	0.10	1
	04/02/04 14:29	227133	(ML/EPA 300.0)	Nitrate as Nitrogen by IC	8.5	mg/l	0.10	1
	04/02/04 14:05	227514	(ML/S4500P-E)	Orthophosphate-P	0.015	mg/l	0.010	1
	04/07/04 19:33	227615	(S4500PE/E365.1)	Total phosphorus-P	0.03	mg/l	0.010	1
	04/09/04 18:16	227964	(ML/EPA 351.2)	Kjeldahl Nitrogen	ND	mg/l	0.20	1
	04/02/04 14:12		(ML/SM9221B)	Total Coliform Bacteria	3500	MPNM	2.0	1
	04/02/04 17:00	227879	(ML/EPA 180.1)	Turbidity	0.75	NTU	0.050	1
SITE 1 INFLOW TO TJ POND 2 (2404020223) Sampled on 04/02/04 11:28								
	04/02/04 14:17		(ML/SM9221C)	Fecal Coliform Bacteria	13	MPNM	2.0	1
	04/06/04 00:00	227367	(ML/EPA 547)	Glyphosate	ND	ug/l	6.0	1
	04/09/04 00:00	227755	(ML/EPA 350.1)	Ammonia Nitrogen	ND	mg/l	0.050	1
	04/02/04 14:41	227131	(ML/EPA 300.0)	Nitrite, Nitrogen by IC	ND	mg/l	0.10	1
	04/02/04 14:41	227133	(ML/EPA 300.0)	Nitrate as Nitrogen by IC	8.5	mg/l	0.10	1
	04/02/04 14:05	227514	(ML/S4500P-E)	Orthophosphate-P	0.014	mg/l	0.010	1
	04/07/04 19:33	227615	(S4500PE/E365.1)	Total phosphorus-P	0.03	mg/l	0.010	1
	04/09/04 18:16	227964	(ML/EPA 351.2)	Kjeldahl Nitrogen	ND	mg/l	0.20	1
	04/02/04 14:17		(ML/SM9221B)	Total Coliform Bacteria	3800	MPNM	2.0	1
	04/02/04 17:00	227879	(ML/EPA 180.1)	Turbidity	0.80	NTU	0.050	1
SITE 2 OUTFLOW FROM TJ POND 1 (2404020224) Sampled on 04/02/04 12:17								
	04/02/04 14:21		(ML/SM9221C)	Fecal Coliform Bacteria	70	MPNM	2.0	1
	04/06/04 00:00	227367	(ML/EPA 547)	Glyphosate	ND	ug/l	6.0	1
	04/09/04 00:00	227755	(ML/EPA 350.1)	Ammonia Nitrogen	ND	mg/l	0.050	1
	04/02/04 14:54	227131	(ML/EPA 300.0)	Nitrite, Nitrogen by IC	ND	mg/l	0.10	1
	04/02/04 14:54	227133	(ML/EPA 300.0)	Nitrate as Nitrogen by IC	6.3	mg/l	0.10	1
	04/02/04 14:05	227514	(ML/S4500P-E)	Orthophosphate-P	ND	mg/l	0.010	1
	04/07/04 19:33	227615	(S4500PE/E365.1)	Total phosphorus-P	ND	mg/l	0.010	1

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Laboratory
Data Report
#124548

Applied Research Dept, MWH (Darren Giles)
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	04/09/04 18:16	227964	(ML/EPA 351.2)	Kjeldahl Nitrogen	ND	mg/l	0.20	1
	04/02/04 14:21		(ML/SM9221B)	Total Coliform Bacteria	2200	MPNM	2.0	1
	04/02/04 17:00	227879	(ML/EPA 180.1)	Turbidity	0.90	NTU	0.050	1
SITE 2 OUTFLOW FROM TJ POND 2 (2404020225) Sampled on 04/02/04 12:23								
	04/02/04 14:30		(ML/SM9221C)	Fecal Coliform Bacteria	300	MPNM	2.0	1
	04/06/04 00:00	227367	(ML/EPA 547)	Glyphosate	ND	ug/l	6.0	1
	04/09/04 00:00	227755	(ML/EPA 350.1)	Ammonia Nitrogen	ND	mg/l	0.050	1
	04/02/04 15:07	227131	(ML/EPA 300.0)	Nitrite, Nitrogen by IC	ND	mg/l	0.10	1
	04/02/04 15:07	227133	(ML/EPA 300.0)	Nitrate as Nitrogen by IC	6.3	mg/l	0.10	1
	04/02/04 14:05	227514	(ML/S4500P-E)	Orthophosphate-P	ND	mg/l	0.010	1
	04/07/04 19:33	227615	(S4500PE/E365.1)	Total phosphorus-P	0.02	mg/l	0.010	1
	04/09/04 18:16	227964	(ML/EPA 351.2)	Kjeldahl Nitrogen	ND	mg/l	0.20	1
	04/02/04 14:30		(ML/SM9221B)	Total Coliform Bacteria	5000	MPNM	2.0	1
	04/02/04 17:00	227879	(ML/EPA 180.1)	Turbidity	0.95	NTU	0.050	1
SITE 4 HAINES CANYON CREEK 1 (2404020226) Sampled on 04/02/04 10:20								
	04/02/04 14:35		(ML/SM9221C)	Fecal Coliform Bacteria	900	MPNM	2.0	1
	04/06/04 00:00	227367	(ML/EPA 547)	Glyphosate	ND	ug/l	6.0	1
	04/09/04 00:00	227755	(ML/EPA 350.1)	Ammonia Nitrogen	ND	mg/l	0.050	1
	04/02/04 15:19	227131	(ML/EPA 300.0)	Nitrite, Nitrogen by IC	ND	mg/l	0.10	1
	04/02/04 15:19	227133	(ML/EPA 300.0)	Nitrate as Nitrogen by IC	3.9	mg/l	0.10	1
	04/02/04 14:05	227514	(ML/S4500P-E)	Orthophosphate-P	0.024	mg/l	0.010	1
	04/07/04 19:33	227615	(S4500PE/E365.1)	Total phosphorus-P	0.04	mg/l	0.010	1
	04/09/04 18:16	227964	(ML/EPA 351.2)	Kjeldahl Nitrogen	0.35	mg/l	0.20	1
	04/02/04 14:35		(ML/SM9221B)	Total Coliform Bacteria	11000	MPNM	2.0	1
	04/02/04 17:00	227876	(ML/EPA 180.1)	Turbidity	2.6	NTU	0.050	1
SITE 4 HAINES CANYON CREEK 2 (2404020227) Sampled on 04/02/04 10:30								
	04/02/04 14:40		(ML/SM9221C)	Fecal Coliform Bacteria	700	MPNM	2.0	1
	04/06/04 00:00	227367	(ML/EPA 547)	Glyphosate	ND	ug/l	6.0	1
	04/09/04 00:00	227755	(ML/EPA 350.1)	Ammonia Nitrogen	ND	mg/l	0.050	1
	04/02/04 15:32	227131	(ML/EPA 300.0)	Nitrite, Nitrogen by IC	ND	mg/l	0.10	1
	04/02/04 15:32	227133	(ML/EPA 300.0)	Nitrate as Nitrogen by IC	3.9	mg/l	0.10	1
	04/02/04 14:05	227514	(ML/S4500P-E)	Orthophosphate-P	0.023	mg/l	0.010	1

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Laboratory
Data Report
#124548

Applied Research Dept, MWH (Darren Giles)
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	04/07/04 19:33	227615	(S4500PE/E365.1)	Total phosphorus-P	0.05	mg/l	0.010	1
	04/09/04 18:16	227964	(ML/EPA 351.2)	Kjeldahl Nitrogen	0.31	mg/l	0.20	1
	04/02/04 14:40		(ML/SM9221B)	Total Coliform Bacteria	2600	MPNM	2.0	1
	04/02/04 17:00	227876	(ML/EPA 180.1)	Turbidity	2.8	NTU	0.050	1

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Laboratory
QC Summary
#124548

Applied Research Dept, MWH (Darren Giles)

QC Ref #227131 - Nitrite, Nitrogen by IC **Analysis Date: 04/02/2004**

2404020222	SITE 1 INFLOW TO TJ POND 1
2404020223	SITE 1 INFLOW TO TJ POND 2
2404020224	SITE 2 OUTFLOW FROM TJ POND 1
2404020225	SITE 2 OUTFLOW FROM TJ POND 2
2404020226	SITE 4 HAINES CANYON CREEK 1
2404020227	SITE 4 HAINES CANYON CREEK 2

QC Ref #227133 - Nitrate as Nitrogen by IC **Analysis Date: 04/02/2004**

2404020222	SITE 1 INFLOW TO TJ POND 1
2404020223	SITE 1 INFLOW TO TJ POND 2
2404020224	SITE 2 OUTFLOW FROM TJ POND 1
2404020225	SITE 2 OUTFLOW FROM TJ POND 2
2404020226	SITE 4 HAINES CANYON CREEK 1
2404020227	SITE 4 HAINES CANYON CREEK 2

QC Ref #227367 - Glyphosate **Analysis Date: 04/06/2004**

2404020222	SITE 1 INFLOW TO TJ POND 1
2404020223	SITE 1 INFLOW TO TJ POND 2
2404020224	SITE 2 OUTFLOW FROM TJ POND 1
2404020225	SITE 2 OUTFLOW FROM TJ POND 2
2404020226	SITE 4 HAINES CANYON CREEK 1
2404020227	SITE 4 HAINES CANYON CREEK 2

QC Ref #227514 - Orthophosphate-P **Analysis Date: 04/02/2004**

2404020222	SITE 1 INFLOW TO TJ POND 1
2404020223	SITE 1 INFLOW TO TJ POND 2
2404020224	SITE 2 OUTFLOW FROM TJ POND 1
2404020225	SITE 2 OUTFLOW FROM TJ POND 2
2404020226	SITE 4 HAINES CANYON CREEK 1
2404020227	SITE 4 HAINES CANYON CREEK 2

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Applied Research Dept, MWH (Darren Giles)
(continued)

QC Ref #227615 - Total phosphorus-P **Analysis Date: 04/07/2004**

2404020222	SITE 1 INFLOW TO TJ POND 1
2404020223	SITE 1 INFLOW TO TJ POND 2
2404020224	SITE 2 OUTFLOW FROM TJ POND 1
2404020225	SITE 2 OUTFLOW FROM TJ POND 2
2404020226	SITE 4 HAINES CANYON CREEK 1
2404020227	SITE 4 HAINES CANYON CREEK 2

QC Ref #227755 - Ammonia Nitrogen **Analysis Date: 04/09/2004**

2404020222	SITE 1 INFLOW TO TJ POND 1
2404020223	SITE 1 INFLOW TO TJ POND 2
2404020224	SITE 2 OUTFLOW FROM TJ POND 1
2404020225	SITE 2 OUTFLOW FROM TJ POND 2
2404020226	SITE 4 HAINES CANYON CREEK 1
2404020227	SITE 4 HAINES CANYON CREEK 2

QC Ref #227876 - Turbidity **Analysis Date: 04/02/2004**

2404020226	SITE 4 HAINES CANYON CREEK 1
2404020227	SITE 4 HAINES CANYON CREEK 2

QC Ref #227879 - Turbidity **Analysis Date: 04/02/2004**

2404020222	SITE 1 INFLOW TO TJ POND 1
2404020223	SITE 1 INFLOW TO TJ POND 2
2404020224	SITE 2 OUTFLOW FROM TJ POND 1
2404020225	SITE 2 OUTFLOW FROM TJ POND 2

QC Ref #227964 - Kjeldahl Nitrogen **Analysis Date: 04/09/2004**

2404020222	SITE 1 INFLOW TO TJ POND 1
2404020223	SITE 1 INFLOW TO TJ POND 2
2404020224	SITE 2 OUTFLOW FROM TJ POND 1
2404020225	SITE 2 OUTFLOW FROM TJ POND 2
2404020226	SITE 4 HAINES CANYON CREEK 1

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Applied Research Dept, MWH (Darren Giles)
(continued)

2404020227 SITE 4 HAINES CANYON CREEK 2

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Laboratory
QC Report
#124548

Applied Research Dept, MWH (Darren Giles)

QC Ref #227131 Nitrite, Nitrogen by IC

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Nitrite, Nitrogen by IC	1.0	1.1	MGL	110.0	(90-110)	
LCS2	Nitrite, Nitrogen by IC	1.0	1.09	MGL	109.0	(90-110)	0.91
MBLK	Nitrite, Nitrogen by IC	ND	<0.10	MGL			
MS	Nitrite, Nitrogen by IC	1.0	1.08	MGL	108.0	(80-120)	
MSD	Nitrite, Nitrogen by IC	1.0	1.08	MGL	108.0	(80-120)	0.00

QC Ref #227133 Nitrate as Nitrogen by IC

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Nitrate as Nitrogen by IC	2.5	2.51	MGL	100.4	(90-110)	
LCS2	Nitrate as Nitrogen by IC	2.5	2.52	MGL	100.8	(90-110)	0.40
MBLK	Nitrate as Nitrogen by IC	ND	<0.10	MGL			
MS	Nitrate as Nitrogen by IC	2.5	2.45	MGL	98.0	(80-120)	
MSD	Nitrate as Nitrogen by IC	2.5	2.45	MGL	98.0	(80-120)	0.00

QC Ref #227367 Glyphosate

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 24	04020206	UGL		(0-0)	
LCS1	Glyphosate	10	11.3	UGL	113.0	(70-130)	
MBLK	Glyphosate	ND	<6.0	UGL			
MS	Glyphosate	10	10.0	UGL	100.0	(70-130)	
MSD	Glyphosate	10	8.76	UGL	87.6	(70-130)	13

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.

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Laboratory
QC Report
#124548

Applied Research Dept, MWH (Darren Giles)
(continued)

QC Ref #227514 Orthophosphate-P

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 24	04040222	MGL		(0-0)	
LCS1	Orthophosphate-P	0.5	0.508	MGL	101.6	(90-110)	
LCS2	Orthophosphate-P	0.5	0.504	MGL	100.8	(90-110)	0.79
MBLK	Orthophosphate-P	ND	<0.010	MGL			
MS	Orthophosphate-P	0.5	0.489	MGL	97.8	(80-120)	
MSD	Orthophosphate-P	0.5	0.488	MGL	97.6	(80-120)	0.20

QC Ref #227615 Total phosphorus-P

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 24	04010095	MGL		(0-0)	
LCS1	Total phosphorus-P	0.4	0.430	MGL	107.5	(90-110)	
LCS2	Total phosphorus-P	0.4	0.400	MGL	100.0	(90-110)	7.2
MBLK	Total phosphorus-P	ND	<0.010	MGL			
MS	Total phosphorus-P	0.4	0.440	MGL	110.0	(90-110)	
MSD	Total phosphorus-P	0.4	0.420	MGL	105.0	(90-110)	4.7
RPD_LCS	Total phosphorus-P	107.500	100.000	MGL	7.2	(0-10)	
RPD_MS	Total phosphorus-P	110.000	105.000	MGL	4.7	(0-10)	

QC Ref #227755 Ammonia Nitrogen

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 24	04020079	MGL		(0-0)	
LCS1	Ammonia Nitrogen	1.00	1.03	MGL	103.0	(90-110)	
LCS2	Ammonia Nitrogen	1.00	1.03	MGL	103.0	(90-110)	0.00
MBLK	Ammonia Nitrogen	ND	<0.050	MGL			
MS	Ammonia Nitrogen	1.00	0.967	MGL	96.7	(90-110)	
MSD	Ammonia Nitrogen	1.00	0.957	MGL	95.7	(90-110)	1.0

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.

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Laboratory
QC Report
#124548

Applied Research Dept, MWH (Darren Giles)
(continued)

QC Ref #227876 Turbidity

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
DUP	Turbidity	0.25	0.25	NTU		(0-20)	0.0

QC Ref #227879 Turbidity

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
DUP	Turbidity	0.30	0.30	NTU		(0-20)	0.0

QC Ref #227964 Kjeldahl Nitrogen

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 24	04010102	MGL		(0-0)	
LCS1	Kjeldahl Nitrogen	4	3.80	MGL	95.0	(90-110)	
LCS2	Kjeldahl Nitrogen	4	3.80	MGL	95.0	(90-110)	0.00
MBLK	Kjeldahl Nitrogen	ND	<0.20	MGL			
MS	Kjeldahl Nitrogen	4	4.25	MGL	106.2	(90-110)	
MSD	Kjeldahl Nitrogen	4	4.00	MGL	100.0	(90-110)	6.1
RPD_LCS	Kjeldahl Nitrogen	95.000	95.000	MGL	0.0	(0-20)	
RPD_MS	Kjeldahl Nitrogen	106.250	100.000	MGL	6.1	(0-10)	

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.

MONTGOMERY WATSON LABORATORIES CHAIN OF CUSTODY RECORD

124548

555 E. Walnut St., Pasadena, CA 91101
(626) 568-6400 (800) 566-5227

MWLABS USE ONLY:

LOGIN COMMENTS: _____

SAMPLES CHECKED/LOGGED IN BY: MD

SAMPLE TEMP, RECEIPT AT LAB 10 C (Compliance: 4 +/- 2*C)

SAMPLES RECEIVED DAY OF COLLECTION? ☑ (check for yes)

BLUE ICE: FROZEN ✓ PARTIALLY FROZEN ___ THAWED ___

TO BE COMPLETED BY SAMPLER:

TAT requested: STD XXX 1 week _____ 3 day _____ 1 day _____

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

REGULATION: _____ (SDWA, Phase V, NPDES, FDA, ...)

REFER TO ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes)

PROJECT CODE	PROJECT JOB # / P.O.#	CLIENT CODE
Big TJ Sampling	1341915.5620.041801	ARD-DG/JF

SAMPLER(S): PRINTED NAME AND SIGNATURE
Darren Giles

ANALYSES REQUIRED (mark an 'X' in all tests required for each sample line)

TIME	DATE	SITE NAME or LOCATION	IDENTIFIER, STATE ID #	MATRIX *	GRAB	COMP	TKN, T-P, NH3-N	NO2,NO3,O-PO4, Turbidity	T & F Coliforms	Glyphos											SAMPLER COMMENTS
11:20	4/2	SITE 1	Inflow to TJ Pond #1		X		X	X	X	X											
11:28	4/2	SITE 1	Inflow to TJ Pond #2		X		X	X	X	X											
12:17	4/2	SITE 2	Outflow from TJ Pond #1		X		X	X	X	X											
12:23	4/2	SITE 2	Outflow from TJ Pond #2		X		X	X	X	X											
		~~SITE 3~~	~~Big TJ Wash #1~~		~~X~~																
		~~SITE 3~~	~~Big TJ Wash #2~~		~~X~~																
10:20	4/2	SITE 4	Haines Canyon Creek #1		X		X	X	X	X											
10:30	4/2	SITE 4	Haines Canyon Creek #2		X		X	X	X	X											

* MATRIX TYPES:

Reported by Volume:

RSW = Raw Surface Water
RGW = ~~Raw~~ Ground Water
FW = Other Finished Water
CFW = Chlor(am)inated Finished Water
SW = Storm Water
WW = Other Waste Water
CWW = Chlorinated Waste Water

Reported by Weight:

SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:		~~MARGARET~~ DARREN GILES	MWH ARD	4/2	
RECEIVED BY:		M. DOWSA	M.W.H.	4-2-4	1330

SPECIAL INSTRUCTIONS

BIG TUJUNGA WASH MITIGATION BANK
WATER QUALITY MONITORING PROGRAM

JULY 2004 LABORATORY RESULTS

MWH Laboratories
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Laboratory Report

for

Applied Research Dept, MWH (Darren Giles)
327 West Maple Avenue

Monrovia , CA 91016

Attention: Darren Giles
Fax: (626) 359-3593

DATE OF ISSUE
JUL 2 2 2004
MWH LABORATORIES

JCH Jim Hein
Project Manager

ACCREDITED IN ACCORDANCE WITH nelac 01114CA

Report#: 129877
BIG-TJ

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments,QC Report,QC Summary,Data Report,Hits Report, totaling 14 page[s].

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Applied Research Dept, MWH (Darren Giles)
327 West Maple Avenue
Monrovia, CA 91016
Attn: Darren Giles
Phone: (626) 303-5945

Customer Code: ARD-DG
PO#: 1341915.5620.041801
Group#: 129877
Project#: BIG-TJ
Proj Mgr: James Hein
Phone: (626) 386-1189

The following samples were received from you on **07/02/04**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Matrix	Sample Date	Tests Scheduled
2407020191	SITE 1 INFLOW TO TJ POND 1	Water	02-jul-2004 10:30:00	FECCOL GLYPHOS NH3 NO2-N NO3 OPO4 T-P TKN TOTCOL TURB
2407020195	SITE 1 INFLOW TO TJ POND 2	Water	02-jul-2004 10:40:00	FECCOL GLYPHOS NH3 NO2-N NO3 OPO4 T-P TKN TOTCOL TURB
2407020196	SITE 2 OUTFLOW FROM TJ POND 1	Water	02-jul-2004 11:30:00	FECCOL GLYPHOS NH3 NO2-N NO3 OPO4 T-P TKN TOTCOL TURB
2407020198	SITE 2 OUTFLOW FROM TJ POND 2	Water	02-jul-2004 11:45:00	FECCOL GLYPHOS NH3 NO2-N NO3 OPO4 T-P TKN TOTCOL TURB
2407020199	SITE 4 HAINES CANYON CREEK 1	Water	02-jul-2004 09:15:00	FECCOL GLYPHOS NH3 NO2-N NO3 OPO4 T-P TKN TOTCOL TURB
2407020200	SITE 4 HAINES CANYON CREEK 2	Water	02-jul-2004 09:25:00	FECCOL GLYPHOS NH3 NO2-N NO3 OPO4 T-P TKN TOTCOL TURB

Test Acronym Description

Test Acronym	Description
FECCOL	Fecal Coliform Bacteria
GLYPHOS	Glyphosate
NH3	Ammonia Nitrogen
NO2-N	Nitrite, Nitrogen by IC
NO3	Nitrate as Nitrogen by IC
OPO4	Orthophosphate-P
T-P	Total phosphorus-P
TKN	Kjeldahl Nitrogen
TOTCOL	Total Coliform Bacteria
TURB	Turbidity

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Report
Comments
#129877

(QC Ref#: 2407020191)
Test: Orthophosphate-P (ML/S4500P-E)
Test code logged in past hold time. Analyzed past hold time
.
H1-Sample analysis performed past holding time. Data not acceptable for regulatory compliance
Test: Turbidity (ML/EPA 180.1)
H1-Sample analysis performed past holding time. Data not acceptable for regulatory compliance

(QC Ref#: 2407020195)
Test: Orthophosphate-P (ML/S4500P-E)
Test code logged in past hold time, analyzed past hold time.
H1-Sample analysis performed past holding time. Data not acceptable for regulatory compliance
Test: Turbidity (ML/EPA 180.1)
H1-Sample analysis performed past holding time. Data not acceptable for regulatory compliance

(QC Ref#: 2407020196)
Test: Orthophosphate-P (ML/S4500P-E)
Test code logged in past hold time, analyzed past hold time.
H1-Sample analysis performed past holding time. Data not acceptable for regulatory compliance
Test: Turbidity (ML/EPA 180.1)
H1-Sample analysis performed past holding time. Data not acceptable for regulatory compliance

(QC Ref#: 2407020198)
Test: Orthophosphate-P (ML/S4500P-E)
Test code logged in past hold time, analyzed past hold time.
H1-Sample analysis performed past holding time. Data not acceptable for regulatory compliance
Test: Turbidity (ML/EPA 180.1)
H1-Sample analysis performed past holding time. Data not acceptable for regulatory compliance

(QC Ref#: 2407020199)

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Test: Orthophosphate-P (ML/S4500P-E)
Test code logged in past hold time. Analyzed past hold time .
H1-Sample analysis performed past holding time. Data not acceptable for regulatory compliance

Test: Turbidity (ML/EPA 180.1)
H1-Sample analysis performed past holding time. Data not acceptable for regulatory compliance

(QC Ref#: 2407020200)

Test: Orthophosphate-P (ML/S4500P-E)
Test code logged in past hold time. Analyzed past hold time .
H1-Sample analysis performed past holding time. Data not acceptable for regulatory compliance

Test: Turbidity (ML/EPA 180.1)
H1-Sample analysis performed past holding time. Data not acceptable for regulatory compliance

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Laboratory
Hits Report
#129877

Applied Research Dept, MWH (Darren Giles)
Darren Giles
327 West Maple Avenue
Monrovia , CA 91016

Samples Received
02-jul-2004 16:00:42

Analyzed	Sample#	Sample ID	Result	UNITS	MRL
	2407020191	**SITE 1 INFLOW TO TJ POND 1**			
07/02/04		Fecal Coliform Bacteria	50	MPN/100 mL	2.000
07/08/04		Kjeldahl Nitrogen	0.50	mg/l	.200
07/02/04		Nitrate as Nitrogen by IC	7.7	mg/l	.200
07/02/04		Nitrite, Nitrogen by IC	0.35	mg/l	.200
07/15/04		Orthophosphate-P	0.030	mg/l	.010
07/02/04		Total Coliform Bacteria	13000	MPN/100 mL	2.000
07/07/04		Total phosphorus-P	0.02	mg/l	.010
07/06/04		Turbidity	0.35	NTU	.050
	2407020195	**SITE 1 INFLOW TO TJ POND 2**			
07/02/04		Fecal Coliform Bacteria	80	MPN/100 mL	2.000
07/08/04		Kjeldahl Nitrogen	0.47	mg/l	.200
07/02/04		Nitrate as Nitrogen by IC	7.9	mg/l	.200
07/15/04		Orthophosphate-P	0.034	mg/l	.010
07/02/04		Total Coliform Bacteria	1700	MPN/100 mL	2.000
07/07/04		Total phosphorus-P	0.02	mg/l	.010
07/06/04		Turbidity	0.78	NTU	.050
	2407020196	**SITE 2 OUTFLOW FROM TJ POND 1**			
07/02/04		Fecal Coliform Bacteria	50	MPN/100 mL	2.000
07/08/04		Kjeldahl Nitrogen	0.67	mg/l	.200
07/02/04		Nitrate as Nitrogen by IC	5.9	mg/l	.200
07/15/04		Orthophosphate-P	0.033	mg/l	.010
07/02/04		Total Coliform Bacteria	600	MPN/100 mL	2.000
07/07/04		Total phosphorus-P	0.02	mg/l	.010
07/06/04		Turbidity	0.65	NTU	.050
	2407020198	**SITE 2 OUTFLOW FROM TJ POND 2**			

SUMMARY OF POSITIVE DATA ONLY.

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Laboratory
Hits Report
#129877

Applied Research Dept, MWH (Darren Giles)
Darren Giles
327 West Maple Avenue
Monrovia , CA 91016

Samples Received
02-jul-2004 16:00:42

Analyzed	Sample#	Sample ID	Result	UNITS	MRL
	2407020198	**SITE 2 OUTFLOW FROM TJ POND 2**			
07/02/04		Fecal Coliform Bacteria	80	MPN/100 mL	2.000
07/08/04		Kjeldahl Nitrogen	0.66	mg/l	.200
07/02/04		Nitrate as Nitrogen by IC	5.8	mg/l	.200
07/15/04		Orthophosphate-P	0.039	mg/l	.010
07/02/04		Total Coliform Bacteria	2200	MPN/100 mL	2.000
07/07/04		Total phosphorus-P	0.03	mg/l	.010
07/06/04		Turbidity	0.85	NTU	.050
	2407020199	**SITE 4 HAINES CANYON CREEK 1**			
07/02/04		Fecal Coliform Bacteria	70	MPN/100 mL	2.000
07/08/04		Kjeldahl Nitrogen	0.26	mg/l	.200
07/02/04		Nitrate as Nitrogen by IC	5.3	mg/l	.200
07/15/04		Orthophosphate-P	0.023	mg/l	.010
07/02/04		Total Coliform Bacteria	2400	MPN/100 mL	2.000
07/07/04		Total phosphorus-P	0.02	mg/l	.010
07/06/04		Turbidity	0.55	NTU	.050
	2407020200	**SITE 4 HAINES CANYON CREEK 2**			
07/02/04		Fecal Coliform Bacteria	30	MPN/100 mL	2.000
07/08/04		Kjeldahl Nitrogen	0.36	mg/l	.200
07/02/04		Nitrate as Nitrogen by IC	5.3	mg/l	.200
07/15/04		Orthophosphate-P	0.023	mg/l	.010
07/02/04		Total Coliform Bacteria	1100	MPN/100 mL	2.000
07/07/04		Total phosphorus-P	0.01	mg/l	.010
07/06/04		Turbidity	0.50	NTU	.050

SUMMARY OF POSITIVE DATA ONLY.

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Laboratory
Data Report
#129877

Applied Research Dept, MWH (Darren Giles)
Darren Giles
327 West Maple Avenue
Monrovia , CA 91016

Samples Received
07/02/04

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
SITE 1 INFLOW TO TJ POND 1 (2407020191) Sampled on 07/02/04 10:30								
	07/02/04 15:31		(ML/SM9221C)	Fecal Coliform Bacteria	50	MPNM	2.0	1
	07/07/04 00:00	237786	(ML/EPA 547)	Glyphosate	ND	ug/l	6.0	1
	07/11/04 17:39	238521	(ML/EPA 350.1)	Ammonia Nitrogen	ND	mg/l	0.050	1
	07/02/04 14:11	237407	(ML/EPA 300.0)	Nitrite, Nitrogen by IC	0.35	mg/l	0.20	2
	07/02/04 14:11	237410	(ML/EPA 300.0)	Nitrate as Nitrogen by IC	7.7	mg/l	0.20	2
	07/15/04 13:30	238825	(ML/S4500P-E)	Orthophosphate-P	0.030(H1)	mg/l	0.010	1
	07/07/04 19:05	237851	(S4500PE/ 365.1)	Total phosphorus-P	0.02	mg/l	0.010	1
	07/08/04 18:11	238068	(ML/EPA 351.2)	Kjeldahl Nitrogen	0.50	mg/l	0.20	1
	07/02/04 15:31		(ML/SM9221B)	Total Coliform Bacteria	13000	MPNM	2.0	1
	07/06/04 15:06	237912	(ML/EPA 180.1)	Turbidity	0.35(H1)	NTU	0.050	1
SITE 1 INFLOW TO TJ POND 2 (2407020195) Sampled on 07/02/04 10:40								
	07/02/04 15:38		(ML/SM9221C)	Fecal Coliform Bacteria	80	MPNM	2.0	1
	07/07/04 00:00	237786	(ML/EPA 547)	Glyphosate	ND	ug/l	6.0	1
	07/11/04 17:39	238521	(ML/EPA 350.1)	Ammonia Nitrogen	ND	mg/l	0.050	1
	07/02/04 13:58	237407	(ML/EPA 300.0)	Nitrite, Nitrogen by IC	ND	mg/l	0.20	2
	07/02/04 13:58	237410	(ML/EPA 300.0)	Nitrate as Nitrogen by IC	7.9	mg/l	0.20	2
	07/15/04 13:30	238825	(ML/S4500P-E)	Orthophosphate-P	0.034(H1)	mg/l	0.010	1
	07/07/04 19:05	237851	(S4500PE/ 365.1)	Total phosphorus-P	0.02	mg/l	0.010	1
	07/08/04 18:16	238069	(ML/EPA 351.2)	Kjeldahl Nitrogen	0.47	mg/l	0.20	1
	07/02/04 15:38		(ML/SM9221B)	Total Coliform Bacteria	1700	MPNM	2.0	1
	07/06/04 15:06	237912	(ML/EPA 180.1)	Turbidity	0.78(H1)	NTU	0.050	1
SITE 2 OUTFLOW FROM TJ POND 1 (2407020196) Sampled on 07/02/04 11:30								
	07/02/04 15:50		(ML/SM9221C)	Fecal Coliform Bacteria	50	MPNM	2.0	1
	07/07/04 00:00	237786	(ML/EPA 547)	Glyphosate	ND	ug/l	6.0	1
	07/11/04 17:39	238521	(ML/EPA 350.1)	Ammonia Nitrogen	ND	mg/l	0.050	1
	07/02/04 15:27	237407	(ML/EPA 300.0)	Nitrite, Nitrogen by IC	ND	mg/l	0.20	2
	07/02/04 15:27	237410	(ML/EPA 300.0)	Nitrate as Nitrogen by IC	5.9	mg/l	0.20	2
	07/15/04 13:30	238825	(ML/S4500P-E)	Orthophosphate-P	0.033(H1)	mg/l	0.010	1
	07/07/04 19:05	237851	(S4500PE/ 365.1)	Total phosphorus-P	0.02	mg/l	0.010	1

MWH Laboratories
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Laboratory
Data Report
#129877

Applied Research Dept, MWH (Darren Giles)
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	07/08/04 18:16	238069	(ML/EPA 351.2)	Kjeldahl Nitrogen	0.67	mg/l	0.20	1
	07/02/04 15:50		(ML/SM9221B)	Total Coliform Bacteria	600	MPNM	2.0	1
	07/06/04 15:06	237912	(ML/EPA 180.1)	Turbidity	0.65(H1)	NTU	0.050	1
SITE 2 OUTFLOW FROM TJ POND 2 (2407020198) Sampled on 07/02/04 11:45								
	07/02/04 15:59		(ML/SM9221C)	Fecal Coliform Bacteria	80	MPNM	2.0	1
	07/07/04 00:00	237786	(ML/EPA 547)	Glyphosate	ND	ug/l	6.0	1
	07/11/04 17:39	238521	(ML/EPA 350.1)	Ammonia Nitrogen	ND	mg/l	0.050	1
	07/02/04 15:39	237407	(ML/EPA 300.0)	Nitrite, Nitrogen by IC	ND	mg/l	0.20	2
	07/02/04 15:39	237410	(ML/EPA 300.0)	Nitrate as Nitrogen by IC	5.8	mg/l	0.20	2
	07/15/04 13:30	238825	(ML/S4500P-E)	Orthophosphate-P	0.039(H1)	mg/l	0.010	1
	07/07/04 19:05	237851	(S4500PE/ 365.1)	Total phosphorus-P	0.03	mg/l	0.010	1
	07/08/04 18:16	238069	(ML/EPA 351.2)	Kjeldahl Nitrogen	0.66	mg/l	0.20	1
	07/02/04 15:59		(ML/SM9221B)	Total Coliform Bacteria	2200	MPNM	2.0	1
	07/06/04 15:06	237912	(ML/EPA 180.1)	Turbidity	0.85(H1)	NTU	0.050	1
SITE 4 HAINES CANYON CREEK 1 (2407020199) Sampled on 07/02/04 09:15								
	07/02/04 16:15		(ML/SM9221C)	Fecal Coliform Bacteria	70	MPNM	2.0	1
	07/07/04 00:00	237786	(ML/EPA 547)	Glyphosate	ND	ug/l	6.0	1
	07/11/04 17:39	238521	(ML/EPA 350.1)	Ammonia Nitrogen	ND	mg/l	0.050	1
	07/02/04 14:24	237407	(ML/EPA 300.0)	Nitrite, Nitrogen by IC	ND	mg/l	0.20	2
	07/02/04 14:24	237410	(ML/EPA 300.0)	Nitrate as Nitrogen by IC	5.3	mg/l	0.20	2
	07/15/04 13:30	238825	(ML/S4500P-E)	Orthophosphate-P	0.023(H1)	mg/l	0.010	1
	07/07/04 19:05	237851	(S4500PE/ 365.1)	Total phosphorus-P	0.02	mg/l	0.010	1
	07/08/04 18:16	238069	(ML/EPA 351.2)	Kjeldahl Nitrogen	0.26	mg/l	0.20	1
	07/02/04 16:15		(ML/SM9221B)	Total Coliform Bacteria	2400	MPNM	2.0	1
	07/06/04 15:06	237912	(ML/EPA 180.1)	Turbidity	0.55(H1)	NTU	0.050	1
SITE 4 HAINES CANYON CREEK 2 (2407020200) Sampled on 07/02/04 09:25								
	07/02/04 16:20		(ML/SM9221C)	Fecal Coliform Bacteria	30	MPNM	2.0	1
	07/08/04 00:00	237939	(ML/EPA 547)	Glyphosate	ND	ug/l	6.0	1
	07/11/04 17:39	238521	(ML/EPA 350.1)	Ammonia Nitrogen	ND	mg/l	0.050	1
	07/02/04 14:36	237407	(ML/EPA 300.0)	Nitrite, Nitrogen by IC	ND	mg/l	0.20	2
	07/02/04 14:36	237410	(ML/EPA 300.0)	Nitrate as Nitrogen by IC	5.3	mg/l	0.20	2
	07/15/04 13:30	238825	(ML/S4500P-E)	Orthophosphate-P	0.023(H1)	mg/l	0.010	1

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Laboratory
Data Report
#129877

Applied Research Dept, MWH (Darren Giles)
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	07/07/04 19:05	237851	(S4500PE/ 365.1)	Total phosphorus-P	0.01	mg/l	0.010	1
	07/08/04 18:16	238069	(ML/EPA 351.2)	Kjeldahl Nitrogen	0.36	mg/l	0.20	1
	07/02/04 16:20		(ML/SM9221B)	Total Coliform Bacteria	1100	MPNM	2.0	1
	07/06/04 15:06	237912	(ML/EPA 180.1)	Turbidity	0.50(H1)	NTU	0.050	1

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Laboratory
QC Summary
#129877

Applied Research Dept, MWH (Darren Giles)

QC Ref #237407 - Nitrite, Nitrogen by IC **Analysis Date: 07/02/2004**

2407020191	SITE 1 INFLOW TO TJ POND 1
2407020195	SITE 1 INFLOW TO TJ POND 2
2407020196	SITE 2 OUTFLOW FROM TJ POND 1
2407020198	SITE 2 OUTFLOW FROM TJ POND 2
2407020199	SITE 4 HAINES CANYON CREEK 1
2407020200	SITE 4 HAINES CANYON CREEK 2

QC Ref #237410 - Nitrate as Nitrogen by IC **Analysis Date: 07/02/2004**

2407020191	SITE 1 INFLOW TO TJ POND 1
2407020195	SITE 1 INFLOW TO TJ POND 2
2407020196	SITE 2 OUTFLOW FROM TJ POND 1
2407020198	SITE 2 OUTFLOW FROM TJ POND 2
2407020199	SITE 4 HAINES CANYON CREEK 1
2407020200	SITE 4 HAINES CANYON CREEK 2

QC Ref #237786 - Glyphosate **Analysis Date: 07/07/2004**

2407020191	SITE 1 INFLOW TO TJ POND 1
2407020195	SITE 1 INFLOW TO TJ POND 2
2407020196	SITE 2 OUTFLOW FROM TJ POND 1
2407020198	SITE 2 OUTFLOW FROM TJ POND 2
2407020199	SITE 4 HAINES CANYON CREEK 1

QC Ref #237851 - Total phosphorus-P **Analysis Date: 07/07/2004**

2407020191	SITE 1 INFLOW TO TJ POND 1
2407020195	SITE 1 INFLOW TO TJ POND 2
2407020196	SITE 2 OUTFLOW FROM TJ POND 1
2407020198	SITE 2 OUTFLOW FROM TJ POND 2
2407020199	SITE 4 HAINES CANYON CREEK 1
2407020200	SITE 4 HAINES CANYON CREEK 2

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Applied Research Dept, MWH (Darren Giles)
(continued)

QC Ref #237912 - Turbidity **Analysis Date: 07/06/2004**

2407020191	SITE 1 INFLOW TO TJ POND 1
2407020195	SITE 1 INFLOW TO TJ POND 2
2407020196	SITE 2 OUTFLOW FROM TJ POND 1
2407020198	SITE 2 OUTFLOW FROM TJ POND 2
2407020199	SITE 4 HAINES CANYON CREEK 1
2407020200	SITE 4 HAINES CANYON CREEK 2

QC Ref #237939 - Glyphosate **Analysis Date: 07/08/2004**

2407020200	SITE 4 HAINES CANYON CREEK 2

QC Ref #238068 - Kjeldahl Nitrogen **Analysis Date: 07/08/2004**

2407020191	SITE 1 INFLOW TO TJ POND 1

QC Ref #238069 - Kjeldahl Nitrogen **Analysis Date: 07/08/2004**

2407020195	SITE 1 INFLOW TO TJ POND 2
2407020196	SITE 2 OUTFLOW FROM TJ POND 1
2407020198	SITE 2 OUTFLOW FROM TJ POND 2
2407020199	SITE 4 HAINES CANYON CREEK 1
2407020200	SITE 4 HAINES CANYON CREEK 2

QC Ref #238521 - Ammonia Nitrogen **Analysis Date: 07/11/2004**

2407020191	SITE 1 INFLOW TO TJ POND 1
2407020195	SITE 1 INFLOW TO TJ POND 2
2407020196	SITE 2 OUTFLOW FROM TJ POND 1
2407020198	SITE 2 OUTFLOW FROM TJ POND 2
2407020199	SITE 4 HAINES CANYON CREEK 1
2407020200	SITE 4 HAINES CANYON CREEK 2

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Applied Research Dept, MWH (Darren Giles)
(continued)

QC Ref #238825 - Orthophosphate-P **Analysis Date: 07/15/2004**

2407020191	SITE 1 INFLOW TO TJ POND 1
2407020195	SITE 1 INFLOW TO TJ POND 2
2407020196	SITE 2 OUTFLOW FROM TJ POND 1
2407020198	SITE 2 OUTFLOW FROM TJ POND 2
2407020199	SITE 4 HAINES CANYON CREEK 1
2407020200	SITE 4 HAINES CANYON CREEK 2

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Laboratory
QC Report
#129877

Applied Research Dept, MWH (Darren Giles)

QC Ref #237407 Nitrite, Nitrogen by IC

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Nitrite, Nitrogen by IC	1.0	1.08	MGL	108.0	(90-110)	
LCS2	Nitrite, Nitrogen by IC	1.0	1.07	MGL	107.0	(90-110)	0.93
MBLK	Nitrite, Nitrogen by IC	ND	<0.10	MGL			
MS	Nitrite, Nitrogen by IC	1.0	1.05	MGL	105.0	(80-120)	
MSD	Nitrite, Nitrogen by IC	1.0	1.04	MGL	104.0	(80-120)	0.96

QC Ref #237410 Nitrate as Nitrogen by IC

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Nitrate as Nitrogen by IC	2.5	2.52	MGL	100.8	(90-110)	
LCS2	Nitrate as Nitrogen by IC	2.5	2.52	MGL	100.8	(90-110)	0.00
MBLK	Nitrate as Nitrogen by IC	ND	<0.10	MGL			
MS	Nitrate as Nitrogen by IC	2.5	2.46	MGL	98.4	(80-120)	
MSD	Nitrate as Nitrogen by IC	2.5	2.46	MGL	98.4	(80-120)	0.00

QC Ref #237786 Glyphosate

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 24	07010025	UGL		(0-0)	
LCS1	Glyphosate	10	9.32	UGL	93.2	(70-130)	
MBLK	Glyphosate	ND	<6.0	UGL			
MS	Glyphosate	10	7.40	UGL	74.0	(70-130)	
MSD	Glyphosate	10	9.02	UGL	90.2	(70-130)	20

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.

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Applied Research Dept, MWH (Darren Giles)
(continued)

QC Ref #237851 Total phosphorus-P

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 24	07020002	MGL		(0-0)	
LCS1	Total phosphorus-P	0.4	0.420	MGL	105.0	(90-110)	
LCS2	Total phosphorus-P	0.4	0.390	MGL	97.5	(90-110)	7.4
MBLK	Total phosphorus-P	ND	<0.010	MGL			
MS	Total phosphorus-P	0.4	0.400	MGL	100.0	(90-110)	
MSD	Total phosphorus-P	0.4	0.430	MGL	107.5	(90-110)	7.2
RPD_LCS	Total phosphorus-P	105.000	97.500	MGL	7.4	(0-10)	
RPD_MS	Total phosphorus-P	100.000	107.500	MGL	7.2	(0-10)	

QC Ref #237912 Turbidity

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
DUP	Turbidity	0.15	0.15	NTU		(0-20)	0.0

QC Ref #237939 Glyphosate

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 24	07020247	UGL		(0-0)	
LCS1	Glyphosate	10	9.0	UGL	90.0	(70-130)	
MBLK	Glyphosate	ND	<6.0	UGL			
MS	Glyphosate	10	8.50	UGL	85.0	(70-130)	
MSD	Glyphosate	10	7.93	UGL	79.3	(70-130)	6.9

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.

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Applied Research Dept, MWH (Darren Giles)
(continued)

QC Ref #238068 Kjeldahl Nitrogen

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 24	06290115	MGL		(0-0)	
LCS1	Kjeldahl Nitrogen	4	3.80	MGL	95.0	(90-110)	
LCS2	Kjeldahl Nitrogen	4	3.70	MGL	92.5	(90-110)	2.7
MBLK	Kjeldahl Nitrogen	ND	<0.20	MGL			
MS	Kjeldahl Nitrogen	4	3.75	MGL	93.8	(90-110)	
MSD	Kjeldahl Nitrogen	4	3.82	MGL	95.5	(90-110)	1.8
RPD_LCS	Kjeldahl Nitrogen	95.000	92.500	MGL	2.7	(0-20)	
RPD_MS	Kjeldahl Nitrogen	93.750	95.500	MGL	1.8	(0-10)	

QC Ref #238069 Kjeldahl Nitrogen

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 24	07020300	MGL		(0-0)	
LCS1	Kjeldahl Nitrogen	4	3.90	MGL	97.5	(90-110)	
LCS2	Kjeldahl Nitrogen	4	3.80	MGL	95.0	(90-110)	2.6
MBLK	Kjeldahl Nitrogen	ND	<0.20	MGL			
MS	Kjeldahl Nitrogen	4	3.99	MGL	99.8	(90-110)	
MSD	Kjeldahl Nitrogen	4	3.99	MGL	99.8	(90-110)	0.00
RPD_LCS	Kjeldahl Nitrogen	97.500	95.000	MGL	2.6	(0-20)	
RPD_MS	Kjeldahl Nitrogen	99.750	99.750	MGL	0.0	(0-10)	

QC Ref #238521 Ammonia Nitrogen

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 24	07020196	MGL		(0-0)	
LCS1	Ammonia Nitrogen	1.00	1.00	MGL	100.0	(90-110)	
LCS2	Ammonia Nitrogen	1.00	1.00	MGL	100.0	(90-110)	0.00
MBLK	Ammonia Nitrogen	ND	<0.050	MGL			

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.

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Laboratory
QC Report
#129877

Applied Research Dept, MWH (Darren Giles)
(continued)

MS	Ammonia Nitrogen	1.00	1.02	MGL	102.0	(90-110)	
MSD	Ammonia Nitrogen	1.00	1.02	MGL	102.0	(90-110)	0.00

QC Ref #238825 Orthophosphate-P

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 24	07150486	MGL		(0-0)	
LCS1	Orthophosphate-P	0.5	0.492	MGL	98.4	(90-110)	
LCS2	Orthophosphate-P	0.5	0.487	MGL	97.4	(90-110)	1.0
MBLK	Orthophosphate-P	ND	<0.010	MGL			
MS	Orthophosphate-P	0.5	0.467	MGL	93.4	(80-120)	
MSD	Orthophosphate-P	0.5	0.481	MGL	96.2	(80-120)	3.0

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.

MONTGOMERY WATSON LABORATORIES — CHAIN OF CUSTODY RECORD

12987

555 E. Walnut St., Pasadena, CA 91101
(626) 568-6400 (800) 566-5227

MWLABS USE ONLY:

LOGIN COMMENTS: _____

SAMPLES CHECKED/LOGGED IN BY: _____

SAMPLE TEMP, RECEIPT AT LAB _____ (Compliance: 4 +/- 2*C)

SAMPLES RECEIVED DAY OF COLLECTION? ☒ (check for yes)

BLUE ICE: FROZEN X PARTIALLY FROZEN ___ THAWED ___

TO BE COMPLETED BY SAMPLER:

TAT requested: STD __XXX__ 1 week _____ 3 day _____ 1 day _____

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

REGULATION: _____ (SDWA, Phase V, NPDES, FDA, ...)

REFER TO ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes)

PROJECT CODE	PROJECT JOB # / P.O.#	CLIENT CODE
Big TJ Sampling	1341915.5620.041801	ARD-DG

SAMPLER(S): PRINTED NAME AND SIGNATURE
Darren Giles

ANALYSES REQUIRED (mark an 'X' in all tests required for each sample line)

TIME	DATE	SITE NAME or LOCATION	IDENTIFIER, STATE ID #	MATRIX *	GRAB	COMP	TKN, T-P, NH3-N	NO2,NO3,O-PO4, Turbidity	T & F Coliforms	Glyphos											SAMPLER COMMENTS
	1030	SITE 1	Inflow to TJ Pond #1		X		X	X	X	X											
	1040	SITE 1	Inflow to TJ Pond #2		X		X	X	X	X											
	1130	SITE 2	Outflow from TJ Pond #1		X		X	X	X	X											
	1145	SITE 2	Outflow from TJ Pond #2		X		X	X	X	X											
		~~SITE 3~~	~~Big TJ Wash #1~~		X																
		~~SITE 3~~	~~Big TJ Wash #2~~		X																
	915	SITE 4	Haines Canyon Creek #1		X		X	X	X	X											
	925	SITE 4	Haines Canyon Creek #2		X		X	X	X	X											

* MATRIX TYPES:

Reported by Volume:
- **RSW** = Raw Surface Water
- **RGW** = Raw Ground Water
- **FW** = Other Finished Water
- **CFW** = Chlor(am)inated Finished Water
- **SW** = Storm Water
- **WW** = Other Waste Water
- **CWW** = Chlorinated Waste Water

Reported by Weight:
- **SO** = Soil
- **SL** = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:		DARREN GILES	MWH ARD	7/2/04	
RECEIVED BY:		Lauren Eaton	MWH	7/2/04	9:45

SPECIAL INSTRUCTIONS

BIG TUJUNGA WASH MITIGATION BANK
WATER QUALITY MONITORING PROGRAM

OCTOBER 2004 LABORATORY RESULTS

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Laboratory Report

for

Applied Research Dept, MWH (Darren Giles)
327 West Maple Avenue

Monrovia , CA 91016

Attention: Darren Giles
Fax: (626) 359-3593

ACCREDITED IN ACCORDANCE WITH nelac 01114CA

LXG Linda Geddes
Project Manager

Report#: 135841
BIG-TJ

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are QC Report,QC Summary,Data Report,Hits Report, totaling 11 page[s].

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Laboratory Hits Report #135841

Applied Research Dept, MWH (Darren Giles)
Darren Giles
327 West Maple Avenue
Monrovia , CA 91016

Samples Received
05-oct-2004 17:55:43

Analyzed	Sample#	Sample ID	Result	UNITS	MRL
	2410050252	**SITE 1 INFLOW TO TJ POND 1**			
10/05/04		Fecal Coliform Bacteria	21	MPN/100 mL	2.000
10/14/04		Kjeldahl Nitrogen	0.51	mg/l	.200
10/06/04		Nitrate as NO3 by IC (calc)	31.2	mg/l	.440
10/05/04		Nitrate as Nitrogen by IC	7.1	mg/l	.200
10/05/04		Orthophosphate-P	0.014	mg/l	.010
10/05/04		Total Coliform Bacteria	300000	MPN/100 mL	2.000
10/13/04		Total phosphorus-P	0.025	mg/l	.010
10/05/04		Turbidity	3.2	NTU	.050
	2410050253	**SITE 1 INFLOW TO TJ POND 2**			
10/05/04		Fecal Coliform Bacteria	8	MPN/100 mL	2.000
10/14/04		Kjeldahl Nitrogen	0.40	mg/l	.200
10/06/04		Nitrate as NO3 by IC (calc)	31.7	mg/l	.440
10/05/04		Nitrate as Nitrogen by IC	7.2	mg/l	.200
10/05/04		Orthophosphate-P	0.015	mg/l	.010
10/05/04		Total Coliform Bacteria	4600	MPN/100 mL	2.000
10/13/04		Total phosphorus-P	0.051	mg/l	.010
10/05/04		Turbidity	5.4	NTU	.050
	2410050254	**SITE 2 OUTFLOW FROM TJ POND 1**			
10/05/04		Fecal Coliform Bacteria	7	MPN/100 mL	2.000
10/14/04		Kjeldahl Nitrogen	0.34	mg/l	.200
10/06/04		Nitrate as NO3 by IC (calc)	26.4	mg/l	.440
10/05/04		Nitrate as Nitrogen by IC	6.0	mg/l	.200
10/05/04		Total Coliform Bacteria	30000	MPN/100 mL	2.000
10/05/04		Turbidity	1.2	NTU	.050
	2410050255	**SITE 2 OUTFLOW FROM TJ POND 2**			

SUMMARY OF POSITIVE DATA ONLY.

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Laboratory Hits Report #135841

Applied Research Dept, MWH (Darren Giles)
Darren Giles
327 West Maple Avenue
Monrovia , CA 91016

Samples Received
05-oct-2004 17:55:43

Analyzed	Sample#	Sample ID	Result	UNITS	MRL
	2410050255	**SITE 2 OUTFLOW FROM TJ POND 2**			
10/05/04		Fecal Coliform Bacteria	8	MPN/100 mL	2.000
10/14/04		Kjeldahl Nitrogen	0.47	mg/l	.200
10/06/04		Nitrate as NO3 by IC (calc)	26.4	mg/l	.440
10/05/04		Nitrate as Nitrogen by IC	6.0	mg/l	.200
10/05/04		Total Coliform Bacteria	90000	MPN/100 mL	2.000
10/13/04		Total phosphorus-P	0.026	mg/l	.010
10/05/04		Turbidity	1.6	NTU	.050
	2410050256	**SITE 4 HAINES CANYON CREEK 1**			
10/05/04		Fecal Coliform Bacteria	220	MPN/100 mL	2.000
10/06/04		Nitrate as NO3 by IC (calc)	23.3	mg/l	.440
10/05/04		Nitrate as Nitrogen by IC	5.3	mg/l	.200
10/05/04		Orthophosphate-P	0.019	mg/l	.010
10/05/04		Total Coliform Bacteria	3000	MPN/100 mL	2.000
10/05/04		Turbidity	0.55	NTU	.050
	2410050257	**SITE 4 HAINES CANYON CREEK 2**			
10/05/04		Fecal Coliform Bacteria	130	MPN/100 mL	2.000
10/06/04		Nitrate as NO3 by IC (calc)	23.8	mg/l	.440
10/05/04		Nitrate as Nitrogen by IC	5.4	mg/l	.200
10/05/04		Orthophosphate-P	0.019	mg/l	.010
10/05/04		Total Coliform Bacteria	700	MPN/100 mL	2.000
10/13/04		Total phosphorus-P	0.020	mg/l	.010
10/05/04		Turbidity	0.50	NTU	.050

SUMMARY OF POSITIVE DATA ONLY.

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Laboratory Data Report #135841

Applied Research Dept, MWH (Darren Giles)
Darren Giles
327 West Maple Avenue
Monrovia , CA 91016

Samples Received
10/05/04

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
SITE 1 INFLOW TO TJ POND 1 (2410050252) Sampled on 10/05/04 11:10								
	10/05/04 15:06		(ML/SM9221C)	Fecal Coliform Bacteria	21	MPNM	2.0	1
	10/07/04 00:00	247970	(ML/EPA 547)	Glyphosate	ND	ug/l	6.0	1
	10/11/04 00:00	248273	(ML/EPA 350.1)	Ammonia Nitrogen	ND	mg/l	0.050	1
	10/05/04 18:39	247677	(ML/EPA 300.0)	Nitrite, Nitrogen by IC	ND	mg/l	0.20	2
	10/05/04 18:39	247676	(ML/EPA 300.0)	Nitrate as Nitrogen by IC	7.1	mg/l	0.20	2
	10/06/04 13:23		(ML/EPA 300.0)	Nitrate as NO3 by IC (calc)	31.2	mg/l	0.44	1
	10/05/04 18:30	248104	(SM4500P-E)	Orthophosphate-P	0.014	mg/l	0.010	1
	10/13/04 18:28	248782	(S4500PE/ 365.1)	Total phosphorus-P	0.025	mg/l	0.010	1
	10/14/04 16:29	248769	(ML/EPA 351.2)	Kjeldahl Nitrogen	0.51	mg/l	0.20	1
	10/05/04 15:06		(ML/SM9221B)	Total Coliform Bacteria	300000	MPNM	2.0	1
	10/05/04 18:26	247829	(ML/EPA 180.1)	Turbidity	3.2	NTU	0.050	1
SITE 1 INFLOW TO TJ POND 2 (2410050253) Sampled on 10/05/04 11:20								
	10/05/04 15:11		(ML/SM9221C)	Fecal Coliform Bacteria	8	MPNM	2.0	1
	10/07/04 00:00	247970	(ML/EPA 547)	Glyphosate	ND	ug/l	6.0	1
	10/11/04 00:00	248273	(ML/EPA 350.1)	Ammonia Nitrogen	ND	mg/l	0.050	1
	10/05/04 19:06	247677	(ML/EPA 300.0)	Nitrite, Nitrogen by IC	ND	mg/l	0.20	2
	10/05/04 19:06	247676	(ML/EPA 300.0)	Nitrate as Nitrogen by IC	7.2	mg/l	0.20	2
	10/06/04 13:23		(ML/EPA 300.0)	Nitrate as NO3 by IC (calc)	31.7	mg/l	0.44	1
	10/05/04 18:30	248104	(SM4500P-E)	Orthophosphate-P	0.015	mg/l	0.010	1
	10/13/04 18:28	248782	(S4500PE/ 365.1)	Total phosphorus-P	0.051	mg/l	0.010	1
	10/14/04 16:29	248769	(ML/EPA 351.2)	Kjeldahl Nitrogen	0.40	mg/l	0.20	1
	10/05/04 15:11		(ML/SM9221B)	Total Coliform Bacteria	4600	MPNM	2.0	1
	10/05/04 18:26	247829	(ML/EPA 180.1)	Turbidity	5.4	NTU	0.050	1

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Laboratory Data Report #135841

Applied Research Dept, MWH (Darren Giles)
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
SITE 2 OUTFLOW FROM TJ POND 1 (2410050254) Sampled on 10/05/04 12:00								
	10/05/04 15:19		(ML/SM9221C)	Fecal Coliform Bacteria	7	MPNM	2.0	1
	10/07/04 00:00	247970	(ML/EPA 547)	Glyphosate	ND	ug/l	6.0	1
	10/11/04 00:00	248273	(ML/EPA 350.1)	Ammonia Nitrogen	ND	mg/l	0.050	1
	10/05/04 19:20	247677	(ML/EPA 300.0)	Nitrite, Nitrogen by IC	ND	mg/l	0.20	2
	10/05/04 19:20	247676	(ML/EPA 300.0)	Nitrate as Nitrogen by IC	6.0	mg/l	0.20	2
	10/06/04 13:23		(ML/EPA 300.0)	Nitrate as NO3 by IC (calc)	26.4	mg/l	0.44	1
	10/05/04 18:30	248104	(SM4500P-E)	Orthophosphate-P	ND	mg/l	0.010	1
	10/13/04 18:28	248782	(S4500PE/ 365.1)	Total phosphorus-P	ND	mg/l	0.010	1
	10/14/04 16:29	248769	(ML/EPA 351.2)	Kjeldahl Nitrogen	0.34	mg/l	0.20	1
	10/05/04 15:19		(ML/SM9221B)	Total Coliform Bacteria	30000	MPNM	2.0	1
	10/05/04 18:26	247829	(ML/EPA 180.1)	Turbidity	1.2	NTU	0.050	1
SITE 2 OUTFLOW FROM TJ POND 2 (2410050255) Sampled on 10/05/04 12:15								
	10/05/04 15:24		(ML/SM9221C)	Fecal Coliform Bacteria	8	MPNM	2.0	1
	10/07/04 00:00	247970	(ML/EPA 547)	Glyphosate	ND	ug/l	6.0	1
	10/11/04 00:00	248273	(ML/EPA 350.1)	Ammonia Nitrogen	ND	mg/l	0.050	1
	10/05/04 19:47	247677	(ML/EPA 300.0)	Nitrite, Nitrogen by IC	ND	mg/l	0.20	2
	10/05/04 19:47	247676	(ML/EPA 300.0)	Nitrate as Nitrogen by IC	6.0	mg/l	0.20	2
	10/06/04 13:23		(ML/EPA 300.0)	Nitrate as NO3 by IC (calc)	26.4	mg/l	0.44	1
	10/05/04 18:30	248104	(SM4500P-E)	Orthophosphate-P	ND	mg/l	0.010	1
	10/13/04 18:28	248782	(S4500PE/ 365.1)	Total phosphorus-P	0.026	mg/l	0.010	1
	10/14/04 16:29	248769	(ML/EPA 351.2)	Kjeldahl Nitrogen	0.47	mg/l	0.20	1
	10/05/04 15:24		(ML/SM9221B)	Total Coliform Bacteria	90000	MPNM	2.0	1
	10/05/04 18:26	247829	(ML/EPA 180.1)	Turbidity	1.6	NTU	0.050	1
SITE 4 HAINES CANYON CREEK 1 (2410050256) Sampled on 10/05/04 10:00								
	10/05/04 15:29		(ML/SM9221C)	Fecal Coliform Bacteria	220	MPNM	2.0	1
	10/07/04 00:00	247970	(ML/EPA 547)	Glyphosate	ND	ug/l	6.0	1
	10/11/04 00:00	248273	(ML/EPA 350.1)	Ammonia Nitrogen	ND	mg/l	0.050	1
	10/05/04 18:53	247677	(ML/EPA 300.0)	Nitrite, Nitrogen by IC	ND	mg/l	0.20	2
	10/05/04 18:53	247676	(ML/EPA 300.0)	Nitrate as Nitrogen by IC	5.3	mg/l	0.20	2
	10/06/04 13:23		(ML/EPA 300.0)	Nitrate as NO3 by IC (calc)	23.3	mg/l	0.44	1
	10/05/04 18:30	248104	(SM4500P-E)	Orthophosphate-P	0.019	mg/l	0.010	1

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Laboratory Data Report #135841

Applied Research Dept, MWH (Darren Giles)
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	10/13/04 18:28	248782	(S4500PE/ 365.1)	Total phosphorus-P	ND	mg/l	0.010	1
	10/14/04 16:29	248769	(ML/EPA 351.2)	Kjeldahl Nitrogen	ND	mg/l	0.20	1
	10/05/04 15:29		(ML/SM9221B)	Total Coliform Bacteria	3000	MPNM	2.0	1
	10/05/04 18:26	247829	(ML/EPA 180.1)	Turbidity	0.55	NTU	0.050	1
SITE 4 HAINES CANYON CREEK 2 (2410050257) Sampled on 10/05/04 10:15								
	10/05/04 15:34		**(ML/SM9221C)**	**Fecal Coliform Bacteria**	**130**	**MPNM**	**2.0**	**1**
	10/07/04 00:00	**247970**	**(ML/EPA 547)**	**Glyphosate**	**ND**	**ug/l**	**6.0**	**1**
	10/11/04 00:00	**248273**	**(ML/EPA 350.1)**	**Ammonia Nitrogen**	**ND**	**mg/l**	**0.050**	**1**
	10/05/04 19:33	**247677**	**(ML/EPA 300.0)**	**Nitrite, Nitrogen by IC**	**ND**	**mg/l**	**0.20**	**2**
	10/05/04 19:33	**247676**	**(ML/EPA 300.0)**	**Nitrate as Nitrogen by IC**	**5.4**	**mg/l**	**0.20**	**2**
	10/06/04 13:23		**(ML/EPA 300.0)**	**Nitrate as NO3 by IC (calc)**	**23.8**	**mg/l**	**0.44**	**1**
	10/05/04 18:30	**248104**	**(SM4500P-E)**	**Orthophosphate-P**	**0.019**	**mg/l**	**0.010**	**1**
	10/13/04 18:28	**248782**	**(S4500PE/ 365.1)**	**Total phosphorus-P**	**0.020**	**mg/l**	**0.010**	**1**
	10/14/04 16:44	**248770**	**(ML/EPA 351.2)**	**Kjeldahl Nitrogen**	**ND**	**mg/l**	**0.20**	**1**
	10/05/04 15:34		**(ML/SM9221B)**	**Total Coliform Bacteria**	**700**	**MPNM**	**2.0**	**1**
	10/05/04 18:26	**247829**	**(ML/EPA 180.1)**	**Turbidity**	**0.50**	**NTU**	**0.050**	**1**

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Laboratory QC Summary #135841

Applied Research Dept, MWH (Darren Giles)

QC Ref #247676 - Nitrate as Nitrogen by IC Analysis Date: 10/05/2004

2410050252	SITE 1 INFLOW TO TJ POND 1
2410050253	SITE 1 INFLOW TO TJ POND 2
2410050254	SITE 2 OUTFLOW FROM TJ POND 1
2410050255	SITE 2 OUTFLOW FROM TJ POND 2
2410050256	SITE 4 HAINES CANYON CREEK 1
2410050257	SITE 4 HAINES CANYON CREEK 2

QC Ref #247677 - Nitrite, Nitrogen by IC Analysis Date: 10/05/2004

2410050252	SITE 1 INFLOW TO TJ POND 1
2410050253	SITE 1 INFLOW TO TJ POND 2
2410050254	SITE 2 OUTFLOW FROM TJ POND 1
2410050255	SITE 2 OUTFLOW FROM TJ POND 2
2410050256	SITE 4 HAINES CANYON CREEK 1
2410050257	SITE 4 HAINES CANYON CREEK 2

QC Ref #247829 - Turbidity Analysis Date: 10/05/2004

2410050252	SITE 1 INFLOW TO TJ POND 1
2410050253	SITE 1 INFLOW TO TJ POND 2
2410050254	SITE 2 OUTFLOW FROM TJ POND 1
2410050255	SITE 2 OUTFLOW FROM TJ POND 2
2410050256	SITE 4 HAINES CANYON CREEK 1
2410050257	SITE 4 HAINES CANYON CREEK 2

QC Ref #247970 - Glyphosate Analysis Date: 10/07/2004

2410050252	SITE 1 INFLOW TO TJ POND 1
2410050253	SITE 1 INFLOW TO TJ POND 2
2410050254	SITE 2 OUTFLOW FROM TJ POND 1
2410050255	SITE 2 OUTFLOW FROM TJ POND 2
2410050256	SITE 4 HAINES CANYON CREEK 1
2410050257	SITE 4 HAINES CANYON CREEK 2

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Applied Research Dept, MWH (Darren Giles)
(continued)

QC Ref #248104 - Orthophosphate-P **Analysis Date: 10/05/2004**

2410050252	SITE 1 INFLOW TO TJ POND 1
2410050253	SITE 1 INFLOW TO TJ POND 2
2410050254	SITE 2 OUTFLOW FROM TJ POND 1
2410050255	SITE 2 OUTFLOW FROM TJ POND 2
2410050256	SITE 4 HAINES CANYON CREEK 1
2410050257	SITE 4 HAINES CANYON CREEK 2

QC Ref #248273 - Ammonia Nitrogen **Analysis Date: 10/11/2004**

2410050252	SITE 1 INFLOW TO TJ POND 1
2410050253	SITE 1 INFLOW TO TJ POND 2
2410050254	SITE 2 OUTFLOW FROM TJ POND 1
2410050255	SITE 2 OUTFLOW FROM TJ POND 2
2410050256	SITE 4 HAINES CANYON CREEK 1
2410050257	SITE 4 HAINES CANYON CREEK 2

QC Ref #248769 - Kjeldahl Nitrogen **Analysis Date: 10/14/2004**

2410050252	SITE 1 INFLOW TO TJ POND 1
2410050253	SITE 1 INFLOW TO TJ POND 2
2410050254	SITE 2 OUTFLOW FROM TJ POND 1
2410050255	SITE 2 OUTFLOW FROM TJ POND 2
2410050256	SITE 4 HAINES CANYON CREEK 1

QC Ref #248770 - Kjeldahl Nitrogen **Analysis Date: 10/14/2004**

2410050257	SITE 4 HAINES CANYON CREEK 2

QC Ref #248782 - Total phosphorus-P **Analysis Date: 10/13/2004**

2410050252	SITE 1 INFLOW TO TJ POND 1
2410050253	SITE 1 INFLOW TO TJ POND 2
2410050254	SITE 2 OUTFLOW FROM TJ POND 1
2410050255	SITE 2 OUTFLOW FROM TJ POND 2
2410050256	SITE 4 HAINES CANYON CREEK 1

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Applied Research Dept, MWH (Darren Giles)
(continued)

2410050257 SITE 4 HAINES CANYON CREEK 2

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Laboratory QC Report #135841

Applied Research Dept, MWH (Darren Giles)

QC Ref #247676 Nitrate as Nitrogen by IC

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 24	10050063	MGL		(0-0)	
LCS1	Nitrate as Nitrogen by IC	2.5	2.49	MGL	99.6	(90-110)	
LCS2	Nitrate as Nitrogen by IC	2.5	2.49	MGL	99.6	(90-110)	0.00
MBLK	Nitrate as Nitrogen by IC	ND	<0.10	MGL			
MS	Nitrate as Nitrogen by IC	2.5	2.26	MGL	90.4	(80-120)	
MSD	Nitrate as Nitrogen by IC	2.5	2.36	MGL	94.4	(80-120)	4.3

QC Ref #247677 Nitrite, Nitrogen by IC

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 24	10050063	MGL		(0-0)	
LCS1	Nitrite, Nitrogen by IC	1.0	0.97	MGL	97.0	(90-110)	
LCS2	Nitrite, Nitrogen by IC	1.0	0.97	MGL	97.0	(90-110)	0.00
MBLK	Nitrite, Nitrogen by IC	ND	<0.10	MGL			
MS	Nitrite, Nitrogen by IC	1.0	0.94	MGL	94.0	(80-120)	
MSD	Nitrite, Nitrogen by IC	1.0	0.93	MGL	93.0	(80-120)	1.1

QC Ref #247829 Turbidity

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
DUP	Turbidity	0.50	0.50	NTU		(0-20)	0.0

QC Ref #247970 Glyphosate

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 24	10050040	UGL		(0-0)	
LCS1	Glyphosate	10	9.67	UGL	96.7	(70-130)	
MBLK	Glyphosate	ND	<6.0	UGL			
MS	Glyphosate	10	9.79	UGL	97.9	(70-130)	

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.

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Laboratory QC Report #135841

Applied Research Dept, MWH (Darren Giles)
(continued)

MSD	Glyphosate	10	10.3	UGL	103.0	(70-130)	5.1

QC Ref #248104 Orthophosphate-P

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 24	10050063	MGL		(0-0)	
LCS1	Orthophosphate-P	0.5	0.492	MGL	98.4	(90-110)	
LCS2	Orthophosphate-P	0.5	0.501	MGL	100.2	(90-110)	1.8
MBLK	Orthophosphate-P	ND	<0.010	MGL			
MS	Orthophosphate-P	0.5	0.492	MGL	98.4	(80-120)	
MSD	Orthophosphate-P	0.5	0.500	MGL	100.0	(80-120)	1.6

QC Ref #248273 Ammonia Nitrogen

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 24	10050145	MGL		(0-0)	
LCS1	Ammonia Nitrogen	1.00	1.03	MGL	103.0	(90-110)	
LCS2	Ammonia Nitrogen	1.00	1.03	MGL	103.0	(90-110)	0.00
MBLK	Ammonia Nitrogen	ND	<0.050	MGL			
MS	Ammonia Nitrogen	1.00	0.981	MGL	98.1	(90-110)	
MSD	Ammonia Nitrogen	1.00	1.01	MGL	101.0	(90-110)	2.9

QC Ref #248769 Kjeldahl Nitrogen

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 24	00500141	MGL		(0-0)	
LCS1	Kjeldahl Nitrogen	4	3.80	MGL	95.0	(90-110)	
LCS2	Kjeldahl Nitrogen	4	3.80	MGL	95.0	(90-110)	0.00
MBLK	Kjeldahl Nitrogen	ND	<0.20	MGL			
MS	Kjeldahl Nitrogen	4	4.08	MGL	102.0	(90-110)	
MSD	Kjeldahl Nitrogen	4	4.13	MGL	103.2	(90-110)	1.2
RPD_LCS	Kjeldahl Nitrogen	95.000	95.000	MGL	0.0	(0-20)	

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Applied Research Dept, MWH (Darren Giles)
(continued)

RPD_MS	Kjeldahl Nitrogen	102.000	103.250	MGL	1.2	(0-10)

QC Ref #248770 Kjeldahl Nitrogen

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 24	0050344	MGL		(0-0)	
LCS1	Kjeldahl Nitrogen	4	3.80	MGL	95.0	(90-110)	
LCS2	Kjeldahl Nitrogen	4	3.80	MGL	95.0	(90-110)	0.00
MBLK	Kjeldahl Nitrogen	ND	<0.20	MGL			
MS	Kjeldahl Nitrogen	4	4.15	MGL	103.8	(90-110)	
MSD	Kjeldahl Nitrogen	4	4.37	MGL	109.2	(90-110)	5.2
RPD_LCS	Kjeldahl Nitrogen	95.000	95.000	MGL	0.0	(0-20)	
RPD_MS	Kjeldahl Nitrogen	103.750	109.250	MGL	5.2	(0-10)	

QC Ref #248782 Total phosphorus-P

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 24	0050082	MGL		(0-0)	
LCS1	Total phosphorus-P	0.4	0.400	MGL	100.0	(90-110)	
LCS2	Total phosphorus-P	0.4	0.410	MGL	102.5	(90-110)	2.5
MBLK	Total phosphorus-P	ND	<0.010	MGL			
MS	Total phosphorus-P	0.4	0.400	MGL	100.0	(90-110)	
MSD	Total phosphorus-P	0.4	0.430	MGL	107.5	(90-110)	7.2
RPD_LCS	Total phosphorus-P	100.000	102.500	MGL	2.5	(0-10)	
RPD_MS	Total phosphorus-P	100.000	107.500	MGL	7.2	(0-10)	

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.

BIG TUJUNGA WASH MITIGATION BANK
WATER QUALITY MONITORING PROGRAM

DECEMBER 2004 LABORATORY RESULTS

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1 800 566 LABS (1 800 566 5227)

Laboratory Report

for

Applied Research Dept, MWH (Darren Giles)
327 West Maple Avenue

Monrovia , CA 91016

Attention: Darren Giles
Fax: (626) 359-3593

DATE OF ISSUE
DEC 2 9 2004
MWH LABORATORIES

ACCREDITED IN ACCORDANCE WITH nelac 01114CA

LXG Linda Geddes
Project Manager

Report#: 139542
BIG-TJ

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments,QC Report,QC Summary,Data Report,Hits Report, totaling 21 page[s].

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Applied Research Dept, MWH (Darren Giles)
327 West Maple Avenue
Monrovia, CA 91016
Attn: Darren Giles
Phone: (626) 303-5945

Customer Code: ARD-DG
PO#: 1341410.5620.011801
Group#: 139542
Project#: BIG-TJ
Proj Mgr: Linda Geddes
Phone: (626) 386-1163

The following samples were received from you on **12/09/04**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Matrix	Sample Date
	Tests Scheduled		
2412090041	SITE 1 INFLOW TO TJ POND 1	Water	09-dec-2004 11:40:00
	@DIAZEDD FECCOL GLYPHOS NH3 NO2-N NO3		
	NO3A OPO4 T-P TKN TOTCOL TURB		
2412090045	SITE 1 INFLOW TO TJ POND 2	Water	09-dec-2004 11:50:00
	@DIAZEDD FECCOL GLYPHOS NH3 NO2-N NO3		
	NO3A OPO4 T-P TKN TOTCOL TURB		
2412090046	SITE 2 OUTFLOW FROM TJ POND 1	Water	09-dec-2004 12:30:00
	@DIAZEDD FECCOL GLYPHOS NH3 NO2-N NO3		
	NO3A OPO4 T-P TKN TOTCOL TURB		
2412090048	SITE 2 OUTFLOW FROM TJ POND 2	Water	09-dec-2004 12:35:00
	@DIAZEDD FECCOL GLYPHOS NH3 NO2-N NO3		
	NO3A OPO4 T-P TKN TOTCOL TURB		
2412090049	SITE 4 HAINES CANYON CREEK 1	Water	09-dec-2004 10:30:00
	@DIAZEDD FECCOL GLYPHOS NH3 NO2-N NO3		
	NO3A OPO4 T-P TKN TOTCOL TURB		
2412090050	SITE 4 HAINES CANYON CREEK 2	Water	09-dec-2004 10:40:00
	@DIAZEDD FECCOL GLYPHOS NH3 NO2-N NO3		
	NO3A OPO4 T-P TKN TOTCOL TURB		
2412090051	SITE 3 BIG TJ WASH 1	Water	09-dec-2004 13:10:00
	@DIAZEDD FECCOL GLYPHOS NH3 NO2-N NO3		
	NO3A OPO4 T-P TKN TOTCOL TURB		
2412090052	SITE 3 BIG TJ WASH 2	Water	09-dec-2004 13:15:00
	@DIAZEDD FECCOL GLYPHOS NH3 NO2-N NO3		
	NO3A OPO4 T-P TKN TOTCOL TURB		

Test Acronym Description

Test Acronym	Description
@DIAZEDD	Diazinon/Chlorpyrifos by GCMS
FECCOL	Fecal Coliform Bacteria
GLYPHOS	Glyphosate
NH3	Ammonia Nitrogen
NO2-N	Nitrite, Nitrogen by IC

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Group#: 139542
Project#: BIG-TJ
Proj Mgr: Linda Geddes
Phone: (626) 386-1163

Test Acronym Description

Test Acronym	Description
NO3	Nitrate as Nitrogen by IC
NO3A	Nitrate as NO3 by IC (calc)
OPO4	Orthophosphate-P
T-P	Total phosphorus-P
TKN	Kjeldahl Nitrogen
TOTCOL	Total Coliform Bacteria
TURB	Turbidity

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Report
Comments
#139542

Group Comments

Analytical results for Diazinon/Chlorpyrifos by GCMS are submitted by CRG Marine Laboratories, Torrance, CA.
ELAP 2261

(QC Ref#: 255715)
Test: Kjeldahl Nitrogen (ML/EPA 351.2)
QC Type: MSD
Result at upper limit of range.

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Laboratory
Hits Report
#139542

Applied Research Dept, MWH (Darren Giles)
Darren Giles
327 West Maple Avenue
Monrovia , CA 91016

Samples Received
09-dec-2004 16:17:10

Analyzed	Sample#	Sample ID	Result	UNITS	MRL
	2412090041	SITE 1 INFLOW TO TJ POND 1			
12/09/04		Fecal Coliform Bacteria	4	MPN/100 mL	2.000
12/09/04		Nitrate as NO3 by IC (calc)	39	mg/l	.880
12/09/04		Nitrate as Nitrogen by IC	9.0	mg/l	.200
12/10/04		Orthophosphate-P	0.035	mg/l	.010
12/09/04		Total Coliform Bacteria	1600	MPN/100 mL	2.000
12/15/04		Total phosphorus-P	0.064	mg/l	.010
12/09/04		Turbidity	1.3	NTU	.050
	2412090045	SITE 1 INFLOW TO TJ POND 2			
12/09/04		Fecal Coliform Bacteria	8	MPN/100 mL	2.000
12/10/04		Nitrate as NO3 by IC (calc)	40	mg/l	.880
12/10/04		Nitrate as Nitrogen by IC	9.1	mg/l	.200
12/10/04		Orthophosphate-P	0.039	mg/l	.010
12/09/04		Total Coliform Bacteria	170	MPN/100 mL	2.000
12/15/04		Total phosphorus-P	0.060	mg/l	.010
12/09/04		Turbidity	0.25	NTU	.050
	2412090046	SITE 2 OUTFLOW FROM TJ POND 1			
12/09/04		Fecal Coliform Bacteria	9	MPN/100 mL	2.000
12/10/04		Nitrate as NO3 by IC (calc)	32	mg/l	.880
12/10/04		Nitrate as Nitrogen by IC	7.3	mg/l	.200
12/10/04		Orthophosphate-P	0.029	mg/l	.010
12/09/04		Total Coliform Bacteria	1400	MPN/100 mL	2.000
12/15/04		Total phosphorus-P	0.065	mg/l	.010
12/09/04		Turbidity	0.20	NTU	.050
	2412090048	SITE 2 OUTFLOW FROM TJ POND 2			

SUMMARY OF POSITIVE DATA ONLY.

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Samples Received
09-dec-2004 16:17:10

Analyzed	Sample#	Sample ID	Result	UNITS	MRL
	2412090048	**SITE 2 OUTFLOW FROM TJ POND 2**			
12/09/04		Fecal Coliform Bacteria	4	MPN/100 mL	2.000
12/10/04		Nitrate as NO3 by IC (calc)	32	mg/l	.880
12/10/04		Nitrate as Nitrogen by IC	7.2	mg/l	.200
12/10/04		Orthophosphate-P	0.029	mg/l	.010
12/09/04		Total Coliform Bacteria	50	MPN/100 mL	2.000
12/15/04		Total phosphorus-P	0.028	mg/l	.010
12/09/04		Turbidity	0.20	NTU	.050
	2412090049	**SITE 4 HAINES CANYON CREEK 1**			
12/09/04		Fecal Coliform Bacteria	110	MPN/100 mL	2.000
12/10/04		Nitrate as NO3 by IC (calc)	13	mg/l	.880
12/10/04		Nitrate as Nitrogen by IC	3.0	mg/l	.200
12/10/04		Orthophosphate-P	0.010	mg/l	.010
12/09/04		Total Coliform Bacteria	700	MPN/100 mL	2.000
12/15/04		Total phosphorus-P	0.025	mg/l	.010
12/09/04		Turbidity	0.35	NTU	.050
	2412090050	**SITE 4 HAINES CANYON CREEK 2**			
12/09/04		Fecal Coliform Bacteria	23	MPN/100 mL	2.000
12/17/04		Kjeldahl Nitrogen	0.35	mg/l	.200
12/10/04		Nitrate as NO3 by IC (calc)	13	mg/l	.880
12/10/04		Nitrate as Nitrogen by IC	2.9	mg/l	.200
12/10/04		Orthophosphate-P	0.010	mg/l	.010
12/09/04		Total Coliform Bacteria	900	MPN/100 mL	2.000
12/15/04		Total phosphorus-P	0.015	mg/l	.010
12/09/04		Turbidity	0.45	NTU	.050
	2412090051	**SITE 3 BIG TJ WASH 1**			

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09-dec-2004 16:17:10

Analyzed	Sample#	Sample ID	Result	UNITS	MRL
	2412090051	**SITE 3 BIG TJ WASH 1**			
12/17/04		Kjeldahl Nitrogen	0.24	mg/l	.200
12/09/04		Total Coliform Bacteria	50	MPN/100 mL	2.000
12/15/04		Total phosphorus-P	0.035	mg/l	.010
12/09/04		Turbidity	0.45	NTU	.050
	2412090052	**SITE 3 BIG TJ WASH 2**			
12/09/04		Total Coliform Bacteria	130	MPN/100 mL	2.000
12/15/04		Total phosphorus-P	0.038	mg/l	.010
12/09/04		Turbidity	0.40	NTU	.050

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Darren Giles
327 West Maple Avenue
Monrovia , CA 91016

Samples Received
12/09/04

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
SITE 1 INFLOW TO TJ POND 1 (2412090041) Sampled on 12/09/04 11:40								
	12/09/04 15:08		(ML/SM9221C)	Fecal Coliform Bacteria	4	MPNM	2.0	1
	12/13/04 00:00	255234	(ML/EPA 547)	Glyphosate	ND	ug/l	6.0	1
	12/15/04 00:00	255170	(ML/EPA 350.1)	Ammonia Nitrogen	ND	mg/l	0.050	1
	12/09/04 22:59	254702	(ML/EPA 300.0)	Nitrite, Nitrogen by IC	ND	mg/l	0.20	2
	12/09/04 22:59	254686	(ML/EPA 300.0)	Nitrate as Nitrogen by IC	9.0	mg/l	0.20	2
	12/09/04 22:59	254695	(ML/EPA 300.0)	Nitrate as NO3 by IC (calc)	39	mg/l	0.88	2
	12/10/04 17:00	255033	(SM4500P-E)	Orthophosphate-P	0.035	mg/l	0.010	1
	12/15/04 17:00	255391	(S4500PE/ 365.1)	Total phosphorus-P	0.064	mg/l	0.010	1
	12/17/04 12:26	255715	(ML/EPA 351.2)	Kjeldahl Nitrogen	ND	mg/l	0.20	1
	12/09/04 15:08		(ML/SM9221B)	Total Coliform Bacteria	1600	MPNM	2.0	1
	12/09/04 19:14	254761	(ML/EPA 180.1)	Turbidity	1.3	NTU	0.050	1
				Diazinon/Chlorpyrifos by GCMS				
	12/22/04 00:00		(EPA 625 MODSUB)	Diazinon	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Bolstar (Sulprofos)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Chlorpyrifos	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Demeton	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Dichlorvos	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Disulfoton	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Dimethoate	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Ethoprop (Ethoprophos)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Fenchlorophos (Ronnel)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Fensulfothion	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Fenthion	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Merphos	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Mevinphos (Phosdrin)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Malathion	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Parathion-methyl	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Phorate	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Tokuthion	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Tetrachlorovinphos (Stirophos)	ND	ng/l	10	1

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Applied Research Dept, MWH (Darren Giles)
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	12/22/04 00:00		(EPA 625 MODSUB)	Trichloronate	ND	ng/l	10	1
SITE 1 INFLOW TO TJ POND 2 (2412090045) Sampled on 12/09/04 11:50								
	12/09/04 15:14		(ML/SM9221C)	Fecal Coliform Bacteria	8	MPNM	2.0	1
	12/13/04 00:00	255234	(ML/EPA 547)	Glyphosate	ND	ug/l	6.0	1
	12/15/04 00:00	255170	(ML/EPA 350.1)	Ammonia Nitrogen	ND	mg/l	0.050	1
	12/10/04 00:56	254703	(ML/EPA 300.0)	Nitrite, Nitrogen by IC	ND	mg/l	0.20	2
	12/10/04 00:56	254687	(ML/EPA 300.0)	Nitrate as Nitrogen by IC	9.1	mg/l	0.20	2
	12/10/04 00:56	254696	(ML/EPA 300.0)	Nitrate as NO3 by IC (calc)	40	mg/l	0.88	2
	12/10/04 17:00	255033	(SM4500P-E)	Orthophosphate-P	0.039	mg/l	0.010	1
	12/15/04 17:00	255391	(S4500PE/ 365.1)	Total phosphorus-P	0.060	mg/l	0.010	1
	12/17/04 12:26	255715	(ML/EPA 351.2)	Kjeldahl Nitrogen	ND	mg/l	0.20	1
	12/09/04 15:14		(ML/SM9221B)	Total Coliform Bacteria	170	MPNM	2.0	1
	12/09/04 19:14	254761	(ML/EPA 180.1)	Turbidity	0.25	NTU	0.050	1
			Diazinon/Chlorpyrifos by GCMS					
	12/22/04 00:00		(EPA 625 MODSUB)	Diazinon	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Bolstar (Sulprofos)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Chlorpyrifos	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Demeton	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Dichlorvos	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Disulfoton	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Dimethoate	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Ethoprop (Ethoprophos)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Fenchlorophos (Ronnel)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Fensulfothion	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Fenthion	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Merphos	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Mevinphos (Phosdrin)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Malathion	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Parathion-methyl	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Phorate	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Tokuthion	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Tetrachlorovinphos (Stirophos)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Trichloronate	ND	ng/l	10	1

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Applied Research Dept, MWH (Darren Giles)
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
SITE 2 OUTFLOW FROM TJ POND 1 (2412090046) Sampled on 12/09/04 12:30								
	12/09/04 15:19		(ML/SM9221C)	Fecal Coliform Bacteria	9	MPNM	2.0	1
	12/13/04 00:00	255234	(ML/EPA 547)	Glyphosate	ND	ug/l	6.0	1
	12/15/04 00:00	255170	(ML/EPA 350.1)	Ammonia Nitrogen	ND	mg/l	0.050	1
	12/10/04 03:50	254703	(ML/EPA 300.0)	Nitrite, Nitrogen by IC	ND	mg/l	0.20	2
	12/10/04 03:50	254687	(ML/EPA 300.0)	Nitrate as Nitrogen by IC	7.3	mg/l	0.20	2
	12/10/04 03:50	254696	(ML/EPA 300.0)	Nitrate as NO3 by IC (calc)	32	mg/l	0.88	2
	12/10/04 17:00	255033	(SM4500P-E)	Orthophosphate-P	0.029	mg/l	0.010	1
	12/15/04 17:00	255391	(S4500PE/ 365.1)	Total phosphorus-P	0.065	mg/l	0.010	1
	12/17/04 12:26	255715	(ML/EPA 351.2)	Kjeldahl Nitrogen	ND	mg/l	0.20	1
	12/09/04 15:19		(ML/SM9221B)	Total Coliform Bacteria	1400	MPNM	2.0	1
	12/09/04 19:14	254761	(ML/EPA 180.1)	Turbidity	0.20	NTU	0.050	1
				Diazinon/Chlorpyrifos by GCMS				
	12/22/04 00:00		(EPA 625 MODSUB)	Diazinon	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Bolstar (Sulprofos)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Chlorpyrifos	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Demeton	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Dichlorvos	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Disulfoton	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Dimethoate	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Ethoprop (Ethoprophos)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Fenchlorophos (Ronnel)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Fensulfothion	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Fenthion	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Merphos	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Mevinphos (Phosdrin)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Malathion	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Parathion-methyl	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Phorate	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Tokuthion	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Tetrachlorovinphos (Stirophos)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Trichloronate	ND	ng/l	10	1

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#139542

Applied Research Dept, MWH (Darren Giles)
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
SITE 2 OUTFLOW FROM TJ POND 2 (2412090048) Sampled on 12/09/04 12:35								
	12/09/04 15:24		(ML/SM9221C)	Fecal Coliform Bacteria	4	MPNM	2.0	1
	12/13/04 00:00	255234	(ML/EPA 547)	Glyphosate	ND	ug/l	6.0	1
	12/15/04 00:00	255170	(ML/EPA 350.1)	Ammonia Nitrogen	ND	mg/l	0.050	1
	12/10/04 03:27	254703	(ML/EPA 300.0)	Nitrite, Nitrogen by IC	ND	mg/l	0.20	2
	12/10/04 03:27	254687	(ML/EPA 300.0)	Nitrate as Nitrogen by IC	7.2	mg/l	0.20	2
	12/10/04 03:27	254696	(ML/EPA 300.0)	Nitrate as NO3 by IC (calc)	32	mg/l	0.88	2
	12/10/04 17:00	255033	(SM4500P-E)	Orthophosphate-P	0.029	mg/l	0.010	1
	12/15/04 17:00	255391	(S4500PE/ 365.1)	Total phosphorus-P	0.028	mg/l	0.010	1
	12/17/04 12:26	255715	(ML/EPA 351.2)	Kjeldahl Nitrogen	ND	mg/l	0.20	1
	12/09/04 15:24		(ML/SM9221B)	Total Coliform Bacteria	50	MPNM	2.0	1
	12/09/04 19:14	254761	(ML/EPA 180.1)	Turbidity	0.20	NTU	0.050	1
Diazinon/Chlorpyrifos by GCMS								
	12/22/04 00:00		(EPA 625 MODSUB)	Diazinon	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Bolstar (Sulprofos)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Chlorpyrifos	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Demeton	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Dichlorvos	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Disulfoton	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Dimethoate	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Ethoprop (Ethoprophos)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Fenchlorophos (Ronnel)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Fensulfothion	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Fenthion	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Merphos	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Mevinphos (Phosdrin)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Malathion	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Parathion-methyl	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Phorate	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Tokuthion	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Tetrachlorovinphos (Stirophos)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Trichloronate	ND	ng/l	10	1

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Data Report
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Applied Research Dept, MWH (Darren Giles)
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
SITE 4 HAINES CANYON CREEK 1 (2412090049) Sampled on 12/09/04 10:30								
	12/09/04 15:30		(ML/SM9221C)	Fecal Coliform Bacteria	110	MPNM	2.0	1
	12/13/04 00:00	255234	(ML/EPA 547)	Glyphosate	ND	ug/l	6.0	1
	12/15/04 00:00	255170	(ML/EPA 350.1)	Ammonia Nitrogen	ND	mg/l	0.050	1
	12/10/04 04:25	254703	(ML/EPA 300.0)	Nitrite, Nitrogen by IC	ND	mg/l	0.20	2
	12/10/04 04:25	254687	(ML/EPA 300.0)	Nitrate as Nitrogen by IC	3.0	mg/l	0.20	2
	12/10/04 04:25	254696	(ML/EPA 300.0)	Nitrate as NO3 by IC (calc)	13	mg/l	0.88	2
	12/10/04 17:00	255033	(SM4500P-E)	Orthophosphate-P	0.010	mg/l	0.010	1
	12/15/04 17:00	255391	(S4500PE/ 365.1)	Total phosphorus-P	0.025	mg/l	0.010	1
	12/17/04 12:26	255715	(ML/EPA 351.2)	Kjeldahl Nitrogen	ND	mg/l	0.20	1
	12/09/04 15:30		(ML/SM9221B)	Total Coliform Bacteria	700	MPNM	2.0	1
	12/09/04 19:37	254764	(ML/EPA 180.1)	Turbidity	0.35	NTU	0.050	1
				Diazinon/Chlorpyrifos by GCMS				
	12/22/04 00:00		(EPA 625 MODSUB)	Diazinon	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Bolstar (Sulprofos)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Chlorpyrifos	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Demeton	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Dichlorvos	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Disulfoton	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Dimethoate	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Ethoprop (Ethoprophos)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Fenchlorophos (Ronnel)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Fensulfothion	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Fenthion	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Merphos	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Mevinphos (Phosdrin)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Malathion	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Parathion-methyl	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Phorate	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Tokuthion	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Tetrachlorovinphos (Stirophos)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Trichloronate	ND	ng/l	10	1

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Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
SITE 4 HAINES CANYON CREEK 2 (2412090050) Sampled on 12/09/04 10:40								
	12/09/04 15:35		(ML/SM9221C)	Fecal Coliform Bacteria	23	MPNM	2.0	1
	12/14/04 00:00	255235	(ML/EPA 547)	Glyphosate	ND	ug/l	6.0	1
	12/15/04 00:00	255170	(ML/EPA 350.1)	Ammonia Nitrogen	ND	mg/l	0.050	1
	12/10/04 07:19	254704	(ML/EPA 300.0)	Nitrite, Nitrogen by IC	ND	mg/l	0.20	2
	12/10/04 07:19	254688	(ML/EPA 300.0)	Nitrate as Nitrogen by IC	2.9	mg/l	0.20	2
	12/10/04 07:19	254698	(ML/EPA 300.0)	Nitrate as NO3 by IC (calc)	13	mg/l	0.88	2
	12/10/04 17:00	255033	(SM4500P-E)	Orthophosphate-P	0.010	mg/l	0.010	1
	12/15/04 17:00	255391	(S4500PE/ 365.1)	Total phosphorus-P	0.015	mg/l	0.010	1
	12/17/04 12:26	255715	(ML/EPA 351.2)	Kjeldahl Nitrogen	0.35	mg/l	0.20	1
	12/09/04 15:35		(ML/SM9221B)	Total Coliform Bacteria	900	MPNM	2.0	1
	12/09/04 19:37	254764	(ML/EPA 180.1)	Turbidity	0.45	NTU	0.050	1
Diazinon/Chlorpyrifos by GCMS								
	12/22/04 00:00		(EPA 625 MODSUB)	Diazinon	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Bolstar (Sulprofos)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Chlorpyrifos	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Demeton	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Dichlorvos	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Disulfoton	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Dimethoate	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Ethoprop (Ethoprophos)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Fenchlorophos (Ronnel)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Fensulfothion	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Fenthion	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Merphos	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Mevinphos (Phosdrin)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Malathion	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Parathion-methyl	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Phorate	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Tokuthion	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Tetrachlorovinphos (Stirophos)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Trichloronate	ND	ng/l	10	1

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Applied Research Dept, MWH (Darren Giles)
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
SITE 3 BIG TJ WASH 1 (2412090051) Sampled on 12/09/04 13:10								
	12/09/04 15:40		(ML/SM9221C)	Fecal Coliform Bacteria	<2	MPNM	2.0	1
	12/14/04 00:00	255235	(ML/EPA 547)	Glyphosate	ND	ug/l	6.0	1
	12/15/04 00:00	255170	(ML/EPA 350.1)	Ammonia Nitrogen	ND	mg/l	0.050	1
	12/09/04 22:01	254702	(ML/EPA 300.0)	Nitrite, Nitrogen by IC	ND	mg/l	0.20	2
	12/09/04 22:01	254686	(ML/EPA 300.0)	Nitrate as Nitrogen by IC	ND	mg/l	0.20	2
	12/09/04 22:01	254695	(ML/EPA 300.0)	Nitrate as NO3 by IC (calc)	ND	mg/l	0.88	2
	12/10/04 17:00	255033	(SM4500P-E)	Orthophosphate-P	ND	mg/l	0.010	1
	12/15/04 17:00	255391	(S4500PE/ 365.1)	Total phosphorus-P	0.035	mg/l	0.010	1
	12/17/04 12:26	255715	(ML/EPA 351.2)	Kjeldahl Nitrogen	0.24	mg/l	0.20	1
	12/09/04 15:40		(ML/SM9221B)	Total Coliform Bacteria	50	MPNM	2.0	1
	12/09/04 19:14	254761	(ML/EPA 180.1)	Turbidity	0.45	NTU	0.050	1
Diazinon/Chlorpyrifos by GCMS								
	12/22/04 00:00		(EPA 625 MODSUB)	Diazinon	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Bolstar (Sulprofos)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Chlorpyrifos	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Demeton	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Dichlorvos	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Disulfoton	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Dimethoate	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Ethoprop (Ethoprophos)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Fenchlorophos (Ronnel)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Fensulfothion	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Fenthion	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Merphos	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Mevinphos (Phosdrin)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Malathion	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Parathion-methyl	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Phorate	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Tokuthion	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Tetrachlorovinphos (Stirophos)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Trichloronate	ND	ng/l	10	1

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Data Report
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Applied Research Dept, MWH (Darren Giles)
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
SITE 3 BIG TJ WASH 2 (2412090052) Sampled on 12/09/04 13:15								
	12/09/04 15:46		(ML/SM9221C)	Fecal Coliform Bacteria	<2	MPNM	2.0	1
	12/14/04 00:00	255235	(ML/EPA 547)	Glyphosate	ND	ug/l	6.0	1
	12/15/04 00:00	255170	(ML/EPA 350.1)	Ammonia Nitrogen	ND	mg/l	0.050	1
	12/09/04 22:36	254702	(ML/EPA 300.0)	Nitrite, Nitrogen by IC	ND	mg/l	0.20	2
	12/09/04 22:36	254686	(ML/EPA 300.0)	Nitrate as Nitrogen by IC	ND	mg/l	0.20	2
	12/09/04 22:36	254695	(ML/EPA 300.0)	Nitrate as NO3 by IC (calc)	ND	mg/l	0.88	2
	12/10/04 17:00	255033	(SM4500P-E)	Orthophosphate-P	ND	mg/l	0.010	1
	12/15/04 17:00	255391	(S4500PE/ 365.1)	Total phosphorus-P	0.038	mg/l	0.010	1
	12/17/04 12:26	255715	(ML/EPA 351.2)	Kjeldahl Nitrogen	ND	mg/l	0.20	1
	12/09/04 15:46		(ML/SM9221B)	Total Coliform Bacteria	130	MPNM	2.0	1
	12/09/04 19:37	254764	(ML/EPA 180.1)	Turbidity	0.40	NTU	0.050	1
Diazinon/Chlorpyrifos by GCMS								
	12/22/04 00:00		(EPA 625 MODSUB)	Diazinon	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Bolstar (Sulprofos)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Chlorpyrifos	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Demeton	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Dichlorvos	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Disulfoton	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Dimethoate	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Ethoprop (Ethoprophos)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Fenchlorophos (Ronnel)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Fensulfothion	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Fenthion	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Merphos	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Mevinphos (Phosdrin)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Malathion	ND	ng/l	5.0	1
	12/22/04 00:00		(EPA 625 MODSUB)	Parathion-methyl	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Phorate	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Tokuthion	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Tetrachlorovinphos (Stirophos)	ND	ng/l	10	1
	12/22/04 00:00		(EPA 625 MODSUB)	Trichloronate	ND	ng/l	10	1

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QC Summary
#139542

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QC Ref #254686 - Nitrate as Nitrogen by IC Analysis Date: 12/09/2004

2412090041	SITE 1 INFLOW TO TJ POND 1
2412090051	SITE 3 BIG TJ WASH 1
2412090052	SITE 3 BIG TJ WASH 2

QC Ref #254687 - Nitrate as Nitrogen by IC Analysis Date: 12/10/2004

2412090045	SITE 1 INFLOW TO TJ POND 2
2412090046	SITE 2 OUTFLOW FROM TJ POND 1
2412090048	SITE 2 OUTFLOW FROM TJ POND 2
2412090049	SITE 4 HAINES CANYON CREEK 1

QC Ref #254688 - Nitrate as Nitrogen by IC Analysis Date: 12/10/2004

2412090050	SITE 4 HAINES CANYON CREEK 2

QC Ref #254695 - Nitrate as NO3 by IC (calc) Analysis Date: 12/09/2004

2412090041	SITE 1 INFLOW TO TJ POND 1
2412090051	SITE 3 BIG TJ WASH 1
2412090052	SITE 3 BIG TJ WASH 2

QC Ref #254696 - Nitrate as NO3 by IC (calc) Analysis Date: 12/10/2004

2412090045	SITE 1 INFLOW TO TJ POND 2
2412090046	SITE 2 OUTFLOW FROM TJ POND 1
2412090048	SITE 2 OUTFLOW FROM TJ POND 2
2412090049	SITE 4 HAINES CANYON CREEK 1

QC Ref #254698 - Nitrate as NO3 by IC (calc) Analysis Date: 12/10/2004

2412090050	SITE 4 HAINES CANYON CREEK 2

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(continued)

QC Ref #254702 - Nitrite, Nitrogen by IC **Analysis Date: 12/09/2004**

2412090041	SITE 1 INFLOW TO TJ POND 1
2412090051	SITE 3 BIG TJ WASH 1
2412090052	SITE 3 BIG TJ WASH 2

QC Ref #254703 - Nitrite, Nitrogen by IC **Analysis Date: 12/10/2004**

2412090045	SITE 1 INFLOW TO TJ POND 2
2412090046	SITE 2 OUTFLOW FROM TJ POND 1
2412090048	SITE 2 OUTFLOW FROM TJ POND 2
2412090049	SITE 4 HAINES CANYON CREEK 1

QC Ref #254704 - Nitrite, Nitrogen by IC **Analysis Date: 12/10/2004**

2412090050	SITE 4 HAINES CANYON CREEK 2

QC Ref #254761 - Turbidity **Analysis Date: 12/09/2004**

2412090041	SITE 1 INFLOW TO TJ POND 1
2412090045	SITE 1 INFLOW TO TJ POND 2
2412090046	SITE 2 OUTFLOW FROM TJ POND 1
2412090048	SITE 2 OUTFLOW FROM TJ POND 2
2412090051	SITE 3 BIG TJ WASH 1

QC Ref #254764 - Turbidity **Analysis Date: 12/09/2004**

2412090049	SITE 4 HAINES CANYON CREEK 1
2412090050	SITE 4 HAINES CANYON CREEK 2
2412090052	SITE 3 BIG TJ WASH 2

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(continued)

QC Ref #255033 - Orthophosphate-P **Analysis Date: 12/10/2004**

2412090041	SITE 1 INFLOW TO TJ POND 1
2412090045	SITE 1 INFLOW TO TJ POND 2
2412090046	SITE 2 OUTFLOW FROM TJ POND 1
2412090048	SITE 2 OUTFLOW FROM TJ POND 2
2412090049	SITE 4 HAINES CANYON CREEK 1
2412090050	SITE 4 HAINES CANYON CREEK 2
2412090051	SITE 3 BIG TJ WASH 1
2412090052	SITE 3 BIG TJ WASH 2

QC Ref #255170 - Ammonia Nitrogen **Analysis Date: 12/15/2004**

2412090041	SITE 1 INFLOW TO TJ POND 1
2412090045	SITE 1 INFLOW TO TJ POND 2
2412090046	SITE 2 OUTFLOW FROM TJ POND 1
2412090048	SITE 2 OUTFLOW FROM TJ POND 2
2412090049	SITE 4 HAINES CANYON CREEK 1
2412090050	SITE 4 HAINES CANYON CREEK 2
2412090051	SITE 3 BIG TJ WASH 1
2412090052	SITE 3 BIG TJ WASH 2

QC Ref #255234 - Glyphosate **Analysis Date: 12/13/2004**

2412090041	SITE 1 INFLOW TO TJ POND 1
2412090045	SITE 1 INFLOW TO TJ POND 2
2412090046	SITE 2 OUTFLOW FROM TJ POND 1
2412090048	SITE 2 OUTFLOW FROM TJ POND 2
2412090049	SITE 4 HAINES CANYON CREEK 1

QC Ref #255235 - Glyphosate **Analysis Date: 12/14/2004**

2412090050	SITE 4 HAINES CANYON CREEK 2
2412090051	SITE 3 BIG TJ WASH 1
2412090052	SITE 3 BIG TJ WASH 2

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(continued)

QC Ref #255391 - Total phosphorus-P **Analysis Date: 12/15/2004**

2412090041	SITE 1 INFLOW TO TJ POND 1
2412090045	SITE 1 INFLOW TO TJ POND 2
2412090046	SITE 2 OUTFLOW FROM TJ POND 1
2412090048	SITE 2 OUTFLOW FROM TJ POND 2
2412090049	SITE 4 HAINES CANYON CREEK 1
2412090050	SITE 4 HAINES CANYON CREEK 2
2412090051	SITE 3 BIG TJ WASH 1
2412090052	SITE 3 BIG TJ WASH 2

QC Ref #255715 - Kjeldahl Nitrogen **Analysis Date: 12/17/2004**

2412090041	SITE 1 INFLOW TO TJ POND 1
2412090045	SITE 1 INFLOW TO TJ POND 2
2412090046	SITE 2 OUTFLOW FROM TJ POND 1
2412090048	SITE 2 OUTFLOW FROM TJ POND 2
2412090049	SITE 4 HAINES CANYON CREEK 1
2412090050	SITE 4 HAINES CANYON CREEK 2
2412090051	SITE 3 BIG TJ WASH 1
2412090052	SITE 3 BIG TJ WASH 2

MWH Laboratories
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Laboratory
QC Report
#139542

Applied Research Dept, MWH (Darren Giles)

QC Ref #254686 Nitrate as Nitrogen by IC

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Nitrate as Nitrogen by IC	2.5	2.44	MGL	97.6	(90-110)	
LCS2	Nitrate as Nitrogen by IC	2.5	2.42	MGL	96.8	(90-110)	0.82
MBLK	Nitrate as Nitrogen by IC	ND	<0.10	MGL			
MS	Nitrate as Nitrogen by IC	2.5	2.35	MGL	94.0	(80-120)	
MSD	Nitrate as Nitrogen by IC	2.5	2.37	MGL	94.8	(80-120)	0.85

QC Ref #254687 Nitrate as Nitrogen by IC

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Nitrate as Nitrogen by IC	2.5	2.49	MGL	99.6	(90-110)	
LCS2	Nitrate as Nitrogen by IC	2.5	2.41	MGL	96.4	(90-110)	3.3
MBLK	Nitrate as Nitrogen by IC	ND	<0.10	MGL			
MS	Nitrate as Nitrogen by IC	2.5	2.32	MGL	92.8	(80-120)	
MSD	Nitrate as Nitrogen by IC	2.5	2.32	MGL	92.8	(80-120)	0.00

QC Ref #254688 Nitrate as Nitrogen by IC

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Nitrate as Nitrogen by IC	2.5	2.44	MGL	97.6	(90-110)	
LCS2	Nitrate as Nitrogen by IC	2.5	2.41	MGL	96.4	(90-110)	1.2
MBLK	Nitrate as Nitrogen by IC	ND	<0.10	MGL			
MS	Nitrate as Nitrogen by IC	2.5	2.4	MGL	96.0	(80-120)	
MSD	Nitrate as Nitrogen by IC	2.5	2.41	MGL	96.4	(80-120)	0.42

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.

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Applied Research Dept, MWH (Darren Giles)
(continued)

QC Ref #254702 Nitrite, Nitrogen by IC

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Nitrite, Nitrogen by IC	1.0	0.991	MGL	99.1	(90-110)	
LCS2	Nitrite, Nitrogen by IC	1.0	0.988	MGL	98.8	(90-110)	0.30
MBLK	Nitrite, Nitrogen by IC	ND	<0.10	MGL			
MS	Nitrite, Nitrogen by IC	1.0	0.979	MGL	97.9	(80-120)	
MSD	Nitrite, Nitrogen by IC	1.0	0.997	MGL	99.7	(80-120)	1.8

QC Ref #254703 Nitrite, Nitrogen by IC

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Nitrite, Nitrogen by IC	1.0	1.01	MGL	101.0	(90-110)	
LCS2	Nitrite, Nitrogen by IC	1.0	0.989	MGL	98.9	(90-110)	2.1
MBLK	Nitrite, Nitrogen by IC	ND	<0.10	MGL			
MS	Nitrite, Nitrogen by IC	1.0	0.964	MGL	96.4	(80-120)	
MSD	Nitrite, Nitrogen by IC	1.0	0.956	MGL	95.6	(80-120)	0.83

QC Ref #254704 Nitrite, Nitrogen by IC

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Nitrite, Nitrogen by IC	1.0	0.988	MGL	98.8	(90-110)	
LCS2	Nitrite, Nitrogen by IC	1.0	0.986	MGL	98.6	(90-110)	0.20
MBLK	Nitrite, Nitrogen by IC	ND	<0.10	MGL			
MS	Nitrite, Nitrogen by IC	1.0	0.903	MGL	90.3	(80-120)	
MSD	Nitrite, Nitrogen by IC	1.0	0.907	MGL	90.7	(80-120)	0.44

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.

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Applied Research Dept, MWH (Darren Giles)
(continued)

QC Ref #254761 Turbidity

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
DUP	Turbidity	ND	ND	NTU		(0-20)	

QC Ref #254764 Turbidity

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
DUP	Turbidity	ND	ND	NTU		(0-20)	

QC Ref #255033 Orthophosphate-P

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 24	12090049	MGL		(0-0)	
LCS1	Orthophosphate-P	0.5	0.508	MGL	101.6	(90-110)	
LCS2	Orthophosphate-P	0.5	0.519	MGL	103.8	(90-110)	2.1
MBLK	Orthophosphate-P	ND	<0.010	MGL			
MS	Orthophosphate-P	0.5	0.516	MGL	103.2	(80-120)	
MSD	Orthophosphate-P	0.5	0.518	MGL	103.6	(80-120)	0.39

QC Ref #255170 Ammonia Nitrogen

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 24	12080304	MGL		(0-0)	
LCS1	Ammonia Nitrogen	1.00	1.01	MGL	101.0	(90-110)	
LCS2	Ammonia Nitrogen	1.00	1.01	MGL	101.0	(90-110)	0.00
MBLK	Ammonia Nitrogen	ND	<0.050	MGL			
MS	Ammonia Nitrogen	1.00	1.04	MGL	104.0	(90-110)	
MSD	Ammonia Nitrogen	1.00	1.02	MGL	102.0	(90-110)	1.9

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.

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Applied Research Dept, MWH (Darren Giles)
(continued)

QC Ref #255234 Glyphosate

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 24	12080003	UGL		(0-0)	
LCS1	Glyphosate	10	9.55	UGL	95.5	(70-130)	
MBLK	Glyphosate	ND	<6.0	UGL			
MS	Glyphosate	10	7.60	UGL	76.0	(70-130)	
MSD	Glyphosate	10	9.03	UGL	90.3	(70-130)	17

QC Ref #255235 Glyphosate

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 24	12090118	UGL		(0-0)	
LCS1	Glyphosate	10	10.2	UGL	102.0	(70-130)	
MBLK	Glyphosate	ND	<6.0	UGL			
MS	Glyphosate	10	10.5	UGL	105.0	(70-130)	
MSD	Glyphosate	10	9.89	UGL	98.9	(70-130)	6.0

QC Ref #255391 Total phosphorus-P

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 24	12100264	MGL		(0-0)	
LCS1	Total phosphorus-P	0.4	0.420	MGL	105.0	(90-110)	
LCS2	Total phosphorus-P	0.4	0.410	MGL	102.5	(90-110)	2.4
MBLK	Total phosphorus-P	ND	<0.010	MGL			
MS	Total phosphorus-P	0.4	0.370	MGL	92.5	(90-110)	
MSD	Total phosphorus-P	0.4	0.390	MGL	97.5	(90-110)	5.3
RPD_LCS	Total phosphorus-P	105.000	102.500	MGL	2.4	(0-10)	
RPD_MS	Total phosphorus-P	92.500	97.500	MGL	5.3	(0-10)	

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.

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Applied Research Dept, MWH (Darren Giles)
(continued)

QC Ref #255715 Kjeldahl Nitrogen

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 24	12090041	MGL		(0-0)	
LCS1	Kjeldahl Nitrogen	4	4.10	MGL	102.5	(90-110)	
LCS2	Kjeldahl Nitrogen	4	4.20	MGL	105.0	(90-110)	2.4
MBLK	Kjeldahl Nitrogen	ND	<0.20	MGL			
MS	Kjeldahl Nitrogen	4	4.07	MGL	101.8	(90-110)	
MSD	Kjeldahl Nitrogen	4	4.40	MGL	110.0	(90-110)	7.8
RPD_LCS	Kjeldahl Nitrogen	102.500	105.000	MGL	2.4	(0-20)	
RPD_MS	Kjeldahl Nitrogen	101.750	110.000	MGL	7.8	(0-10)	

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.

MONTGOMERY WATSON LABORATORIES — CHAIN OF CUSTODY RECORD

139542

555 E. Walnut St., Pasadena, CA 91101
(626) 568-6400 (800) 566-5227

MWLABS USE ONLY:

LOGIN COMMENTS: _____

SAMPLES CHECKED/LOGGED IN BY: _____

SAMPLE TEMP, RECEIPT AT LAB 15 (Compliance: 4 +/- 2*C)

SAMPLES RECEIVED DAY OF COLLECTION? [X] (check for yes)

BLUE ICE: FROZEN X PARTIALLY FROZEN ___ THAWED ___

TO BE COMPLETED BY SAMPLER:

TAT requested: STD __XXX__ 1 week _____ 3 day _____ 1 day _____

COMPLIANCE SAMPLES [ ] (check for yes)
- Requires state forms [ ]
NON-COMPLIANCE SAMPLES [ ]

REGULATION: _____ (SDWA, Phase V, NPDES, FDA, ...)

REFER TO ATTACHED BOTTLE ORDER FOR ANALYSES [ ] (check for yes)

PROJECT CODE	PROJECT JOB # / P.O.#	CLIENT CODE
Big TJ Sampling	1341915.5620.041801	ARD-DG

SAMPLER(S): PRINTED NAME AND SIGNATURE
Darren Giles

ANALYSES REQUIRED (mark an 'X' in all tests required for each sample line)

TIME	DATE	SITE NAME or LOCATION	IDENTIFIER, STATE ID #	MATRIX *	GRAB	COMP	TKN, T-P, NH3-N	NO2,NO3,O-PO4, Turbidity	T & F Coliforms	Glyphos	DIAZEDD										SAMPLER COMMENTS
11:40	9-Dec	SITE 1	Inflow to TJ Pond #1		X		X	X	X	X	X										
11:50	9-Dec	SITE 1	Inflow to TJ Pond #2		X		X	X	X	X	X										
12:30	9-Dec	SITE 2	Outflow from TJ Pond #1		X		X	X	X	X	X										
12:35	9-Dec	SITE 2	Outflow from TJ Pond #2		X		X	X	X	X	X										
10:30	9-Dec	SITE 4	Haines Canyon Creek #1		X		X	X	X	X	X										
10:40	9-Dec	SITE 4	Haines Canyon Creek #2		X		X	X	X	X	X										
13:10	9 Dec	SITE 3	BIG TJ WASH 1		X		X	X	X	X	X										
13:15	9 Dec	SITE 4	BIG TJ WASH 2		X		X	X	X	X	X										

Received 12-10-04 1011 pm

* MATRIX TYPES:

Reported by Volume:
- **RSW** = Raw Surface Water
- **RGW** = Raw Ground Water
- **FW** = Other Finished Water
- **CFW** = Chlor(am)inated Finished Water
- **SW** = Storm Water
- **WW** = Other Waste Water
- **CWW** = Chlorinated Waste Water

Reported by Weight:
- **SO** = Soil
- **SL** = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:		DARREN GILES	ARD	12/9/04	
RECEIVED BY:			MWH	12-9-04	1428

SPECIAL INSTRUCTIONS

139542
ard-dg

CRG
Marine Laboratories, Inc.
2020 Del Amo Blvd. Suite 200, Torrance, CA 90501 • (310) 533-5190 • FAX (310) 533-5003 • mmercier@crglabs.com

December 24, 2004

MWH Laboratories
70 Royal Oaks Dr., Suite 100
Monrovia, CA 91016-3629

Re:	CRG Project ID:	P2402gh
	MWH Project:	139542
	MWH Sub PO:	99-15489

ATTN: Mr. Michael Lettona

CRG Laboratories is pleased to provide you with the enclosed analytical data report for your 139542 Project. According to the chain-of-custody, 8 wastewater samples were received intact and cool at CRG on December 9, 2004. Per your instructions, the samples were analyzed for:

- Organophosphorus Pesticides By GCMS Using EPA Method 625

Please don't hesitate to call if you have any questions and thank you very much for using our laboratory for your analytical needs.

Regards,
Misty B. Mercier
Project Manager

Digitally signed by Misty Borja Mercier
DN: CN = Misty Borja Mercier, C = US, O = CRG Marine Laboratories, Inc.
Date: 2004.12.24 14:04:03 -08'00'

Reviewed and Approved

DATA REPORT

CRG Marine Laboratories, Inc.

2020 Del Amo Blvd., Suite 200, Torrance, CA 90501-1206 (310) 533-5190 FAX (310) 533-5003 crglabs@sbcglobal.net

Organophosphorus Pesticides

Client: *MWH Laboratories* **CRG Project ID:** *2402gh*

CRG ID#:	*21613*	**Sample Description:**	2412090041 Site 1 INFLOW to TJ Pond 1	**Date Sampled:**	09-Dec-04 11:40
Replicate #:	R1		Project #139542 / PO #99-15489	**Date Received:**	09-Dec-04
Batch ID:	2402-12044	**Matrix:**	Wastewater	**Date Processed:**	14-Dec-04
Instrument:	GC/MS #2 Shimadzu QP2010	**Analyst:**	D. Gonsman	**Date Analyzed:**	22-Dec-04

CONSTITUENT	FRACTION	METHOD	RESULT	UNITS	MDL	RL	DILUTION FACTOR	ACCEPTANCE RANGE
(PCB030)	Total	EPA 625	92	% Recovery			1	46 - 119%
(PCB112)	Total	EPA 625	97	% Recovery			1	52 - 123%
(PCB198)	Total	EPA 625	101	% Recovery			1	59 - 123%
(TCMX)	Total	EPA 625	92	% Recovery			1	40 - 110%
Bolstar (Sulprofos)	Total	EPA 625	ND	ng/L	10	20	1	NA
Chlorpyrifos	Total	EPA 625	ND	ng/L	5	10	1	NA
Demeton	Total	EPA 625	ND	ng/L	10	20	1	NA
Diazinon	Total	EPA 625	ND	ng/L	5	10	1	NA
Dichlorvos	Total	EPA 625	ND	ng/L	10	20	1	NA
Dimethoate	Total	EPA 625	ND	ng/L	5	10	1	NA
Disulfoton	Total	EPA 625	ND	ng/L	10	20	1	NA
Ethoprop (Ethoprofos)	Total	EPA 625	ND	ng/L	10	20	1	NA
Fenchlorophos (Ronnel)	Total	EPA 625	ND	ng/L	10	20	1	NA
Fensulfothion	Total	EPA 625	ND	ng/L	10	20	1	NA
Fenthion	Total	EPA 625	ND	ng/L	10	20	1	NA
Malathion	Total	EPA 625	ND	ng/L	5	10	1	NA
Merphos	Total	EPA 625	ND	ng/L	10	20	1	NA
Methyl Parathion	Total	EPA 625	ND	ng/L	10	20	1	NA
Mevinphos (Phosdrin)	Total	EPA 625	ND	ng/L	10	20	1	NA
Phorate	Total	EPA 625	ND	ng/L	10	20	1	NA

MDL= Method Detection Limit (CFR 40 Part 136); RL= Minimum Level (SWRCB); E= Estimated Value below the RL and above the MDL; ND= Not Detected; NA= Not Applicable.

California ELAP Certificate # 2261

CRG Marine Laboratories, Inc.

2020 Del Amo Blvd., Suite 200, Torrance, CA 90501-1206 (310) 533-5190 FAX (310) 533-5003 crglabs@sbcglobal.net

Organophosphorus Pesticides

Client: ***MWH Laboratories*** **CRG Project ID:** ***2402gh***

CRG ID#:	***21613***	**Sample Description:**	2412090041	Site 1 INFLOW to TJ Pond 1	**Date Sampled:**	09-Dec-04	11:40
Replicate #:	R1		Project #139542 / PO #99-15489		**Date Received:**	09-Dec-04	
Batch ID:	2402-12044	**Matrix:**	Wastewater		**Date Processed:**	14-Dec-04	
Instrument:	GC/MS #2 Shimadzu QP2010	**Analyst:**	D. Gonsman		**Date Analyzed:**	22-Dec-04	

CONSTITUENT	FRACTION	METHOD	RESULT	UNITS	MDL	RL	DILUTION FACTOR	ACCEPTANCE RANGE
Tetrachlorvinphos (Stirofos)	Total	EPA 625	ND	ng/L	10	20	1	NA
Tokuthion	Total	EPA 625	ND	ng/L	10	20	1	NA
Trichloronate	Total	EPA 625	ND	ng/L	10	20	1	NA

MDL= Method Detection Limit (CFR 40 Part 136); RL= Minimum Level (SWRCB); E= Estimated Value below the RL and above the MDL; ND= Not Detected; NA= Not Applicable.

California ELAP Certificate # 2261

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Organophosphorus Pesticides

Client: *MWH Laboratories* **CRG Project ID:** *2402gh*

CRG ID#:	*21614*	**Sample Description:**	2412090045 Site 1 INFLOW to TJ Pond 2	**Date Sampled:**	09-Dec-04	11:50
Replicate #:	R1		Project #139542 / PO #99-15489	**Date Received:**	09-Dec-04	
Batch ID:	2402-12044	**Matrix:**	Wastewater	**Date Processed:**	14-Dec-04	
Instrument:	GC/MS #2 Shimadzu QP2010	**Analyst:**	D. Gonsman	**Date Analyzed:**	22-Dec-04	

CONSTITUENT	FRACTION	METHOD	RESULT	UNITS	MDL	RL	DILUTION FACTOR	ACCEPTANCE RANGE
(PCB030)	Total	EPA 625	94	% Recovery			1	46 - 119%
(PCB112)	Total	EPA 625	96	% Recovery			1	52 - 123%
(PCB198)	Total	EPA 625	102	% Recovery			1	59 - 123%
(TCMX)	Total	EPA 625	92	% Recovery			1	40 - 110%
Bolstar (Sulprofos)	Total	EPA 625	ND	ng/L	10	20	1	NA
Chlorpyrifos	Total	EPA 625	ND	ng/L	5	10	1	NA
Demeton	Total	EPA 625	ND	ng/L	10	20	1	NA
Diazinon	Total	EPA 625	ND	ng/L	5	10	1	NA
Dichlorvos	Total	EPA 625	ND	ng/L	10	20	1	NA
Dimethoate	Total	EPA 625	ND	ng/L	5	10	1	NA
Disulfoton	Total	EPA 625	ND	ng/L	10	20	1	NA
Ethoprop (Ethoprofos)	Total	EPA 625	ND	ng/L	10	20	1	NA
Fenchlorophos (Ronnel)	Total	EPA 625	ND	ng/L	10	20	1	NA
Fensulfothion	Total	EPA 625	ND	ng/L	10	20	1	NA
Fenthion	Total	EPA 625	ND	ng/L	10	20	1	NA
Malathion	Total	EPA 625	ND	ng/L	5	10	1	NA
Merphos	Total	EPA 625	ND	ng/L	10	20	1	NA
Methyl Parathion	Total	EPA 625	ND	ng/L	10	20	1	NA
Mevinphos (Phosdrin)	Total	EPA 625	ND	ng/L	10	20	1	NA
Phorate	Total	EPA 625	ND	ng/L	10	20	1	NA

MDL= Method Detection Limit (CFR 40 Part 136); RL= Minimum Level (SWRCB); E= Estimated Value below the RL and above the MDL; ND= Not Detected; NA= Not Applicable.

California ELAP Certificate # 2261

CRG Marine Laboratories, Inc.

2020 Del Amo Blvd., Suite 200, Torrance, CA 90501-1206 (310) 533-5190 FAX (310) 533-5003 crglabs@sbcglobal.net

Organophosphorus Pesticides

Client: ***MWH Laboratories*** **CRG Project ID:** ***2402gh***

CRG ID#:	***21614***	**Sample Description:**	2412090045 Site 1 INFLOW to TJ Pond 2	**Date Sampled:**	09-Dec-04	11:50
Replicate #:	R1		Project #139542 / PO #99-15489	**Date Received:**	09-Dec-04	
Batch ID:	2402-12044	**Matrix:**	Wastewater	**Date Processed:**	14-Dec-04	
Instrument:	GC/MS #2 Shimadzu QP2010	**Analyst:**	D. Gonsman	**Date Analyzed:**	22-Dec-04	

CONSTITUENT	FRACTION	METHOD	RESULT	UNITS	MDL	RL	DILUTION FACTOR	ACCEPTANCE RANGE
Tetrachlorvinphos (Stirofos)	Total	EPA 625	ND	ng/L	10	20	1	NA
Tokuthion	Total	EPA 625	ND	ng/L	10	20	1	NA
Trichloronate	Total	EPA 625	ND	ng/L	10	20	1	NA

MDL= Method Detection Limit (CFR 40 Part 136); RL= Minimum Level (SWRCB); E= Estimated Value below the RL and above the MDL; ND= Not Detected; NA= Not Applicable.

California ELAP Certificate # 2261

CRG Marine Laboratories, Inc.

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Organophosphorus Pesticides

Client: *MWH Laboratories* **CRG Project ID:** *2402gh*

CRG ID#:	*21615*	**Sample Description:**	2412090046 Site 2 OUTFLOW fr. TJ Pond	**Date Sampled:**	09-Dec-04	12:30
Replicate #:	R1		Project #139542 / PO #99-15489	**Date Received:**	09-Dec-04	
Batch ID:	2402-12044	**Matrix:**	Wastewater	**Date Processed:**	14-Dec-04	
Instrument:	GC/MS #2 Shimadzu QP2010	**Analyst:**	D. Gonsman	**Date Analyzed:**	22-Dec-04	

CONSTITUENT	FRACTION	METHOD	RESULT	UNITS	MDL	RL	DILUTION FACTOR	ACCEPTANCE RANGE
(PCB030)	Total	EPA 625	91	% Recovery			1	46 - 119%
(PCB112)	Total	EPA 625	93	% Recovery			1	52 - 123%
(PCB198)	Total	EPA 625	97	% Recovery			1	59 - 123%
(TCMX)	Total	EPA 625	93	% Recovery			1	40 - 110%
Bolstar (Sulprofos)	Total	EPA 625	ND	ng/L	10	20	1	NA
Chlorpyrifos	Total	EPA 625	ND	ng/L	5	10	1	NA
Demeton	Total	EPA 625	ND	ng/L	10	20	1	NA
Diazinon	Total	EPA 625	ND	ng/L	5	10	1	NA
Dichlorvos	Total	EPA 625	ND	ng/L	10	20	1	NA
Dimethoate	Total	EPA 625	ND	ng/L	5	10	1	NA
Disulfoton	Total	EPA 625	ND	ng/L	10	20	1	NA
Ethoprop (Ethoprofos)	Total	EPA 625	ND	ng/L	10	20	1	NA
Fenchlorophos (Ronnel)	Total	EPA 625	ND	ng/L	10	20	1	NA
Fensulfothion	Total	EPA 625	ND	ng/L	10	20	1	NA
Fenthion	Total	EPA 625	ND	ng/L	10	20	1	NA
Malathion	Total	EPA 625	ND	ng/L	5	10	1	NA
Merphos	Total	EPA 625	ND	ng/L	10	20	1	NA
Methyl Parathion	Total	EPA 625	ND	ng/L	10	20	1	NA
Mevinphos (Phosdrin)	Total	EPA 625	ND	ng/L	10	20	1	NA
Phorate	Total	EPA 625	ND	ng/L	10	20	1	NA

MDL= Method Detection Limit (CFR 40 Part 136); RL= Minimum Level (SWRCB); E= Estimated Value below the RL and above the MDL; ND= Not Detected; NA= Not Applicable.

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CRG Marine Laboratories, Inc.

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Organophosphorus Pesticides

Client: *MWH Laboratories* **CRG Project ID:** *2402gh*

CRG ID#:	*21615*	**Sample Description:**	2412090046 Site 2 OUTFLOW fr. TJ Pond	**Date Sampled:**	09-Dec-04	12:30
Replicate #:	R1		Project #139542 / PO #99-15489	**Date Received:**	09-Dec-04	
Batch ID:	2402-12044	**Matrix:**	Wastewater	**Date Processed:**	14-Dec-04	
Instrument:	GC/MS #2 Shimadzu QP2010	**Analyst:**	D. Gonsman	**Date Analyzed:**	22-Dec-04	

CONSTITUENT	FRACTION	METHOD	RESULT	UNITS	MDL	RL	DILUTION FACTOR	ACCEPTANCE RANGE
Tetrachlorvinphos (Stirofos)	Total	EPA 625	ND	ng/L	10	20	1	NA
Tokuthion	Total	EPA 625	ND	ng/L	10	20	1	NA
Trichloronate	Total	EPA 625	ND	ng/L	10	20	1	NA

MDL= Method Detection Limit (CFR 40 Part 136); RL= Minimum Level (SWRCB); E= Estimated Value below the RL and above the MDL; ND= Not Detected; NA= Not Applicable.

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Organophosphorus Pesticides

Client: ***MWH Laboratories*** **CRG Project ID:** ***2402gh***

CRG ID#:	***21616***	**Sample Description:**	2412090048 Site 2 OUTFLOW fr. TJ Pond	**Date Sampled:**	09-Dec-04 12:35
Replicate #:	R1		Project #139542 / PO #99-15489	**Date Received:**	09-Dec-04
Batch ID:	2402-12044	**Matrix:**	Wastewater	**Date Processed:**	14-Dec-04
Instrument:	GC/MS #2 Shimadzu QP2010	**Analyst:**	D. Gonsman	**Date Analyzed:**	22-Dec-04

CONSTITUENT	FRACTION	METHOD	RESULT	UNITS	MDL	RL	DILUTION FACTOR	ACCEPTANCE RANGE
(PCB030)	Total	EPA 625	95	% Recovery			1	46 - 119%
(PCB112)	Total	EPA 625	98	% Recovery			1	52 - 123%
(PCB198)	Total	EPA 625	102	% Recovery			1	59 - 123%
(TCMX)	Total	EPA 625	96	% Recovery			1	40 - 110%
Bolstar (Sulprofos)	Total	EPA 625	ND	ng/L	10	20	1	NA
Chlorpyrifos	Total	EPA 625	ND	ng/L	5	10	1	NA
Demeton	Total	EPA 625	ND	ng/L	10	20	1	NA
Diazinon	Total	EPA 625	ND	ng/L	5	10	1	NA
Dichlorvos	Total	EPA 625	ND	ng/L	10	20	1	NA
Dimethoate	Total	EPA 625	ND	ng/L	5	10	1	NA
Disulfoton	Total	EPA 625	ND	ng/L	10	20	1	NA
Ethoprop (Ethoprofos)	Total	EPA 625	ND	ng/L	10	20	1	NA
Fenchlorophos (Ronnel)	Total	EPA 625	ND	ng/L	10	20	1	NA
Fensulfothion	Total	EPA 625	ND	ng/L	10	20	1	NA
Fenthion	Total	EPA 625	ND	ng/L	10	20	1	NA
Malathion	Total	EPA 625	ND	ng/L	5	10	1	NA
Merphos	Total	EPA 625	ND	ng/L	10	20	1	NA
Methyl Parathion	Total	EPA 625	ND	ng/L	10	20	1	NA
Mevinphos (Phosdrin)	Total	EPA 625	ND	ng/L	10	20	1	NA
Phorate	Total	EPA 625	ND	ng/L	10	20	1	NA

MDL= Method Detection Limit (CFR 40 Part 136); RL= Minimum Level (SWRCB); E= Estimated Value below the RL and above the MDL; ND= Not Detected; NA= Not Applicable.

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Organophosphorus Pesticides

Client: *MWH Laboratories* **CRG Project ID:** *2402gh*

CRG ID#:	*21616*	**Sample Description:**	2412090048 Site 2 OUTFLOW fr. TJ Pond	**Date Sampled:**	09-Dec-04 12:35
Replicate #:	R1		Project #139542 / PO #99-15489	**Date Received:**	09-Dec-04
Batch ID:	2402-12044	**Matrix:**	Wastewater	**Date Processed:**	14-Dec-04
Instrument:	GC/MS #2 Shimadzu QP2010	**Analyst:**	D. Gonsman	**Date Analyzed:**	22-Dec-04

CONSTITUENT	FRACTION	METHOD	RESULT	UNITS	MDL	RL	DILUTION FACTOR	ACCEPTANCE RANGE
Tetrachlorvinphos (Stirofos)	Total	EPA 625	ND	ng/L	10	20	1	NA
Tokuthion	Total	EPA 625	ND	ng/L	10	20	1	NA
Trichloronate	Total	EPA 625	ND	ng/L	10	20	1	NA

MDL= Method Detection Limit (CFR 40 Part 136); RL= Minimum Level (SWRCB); E= Estimated Value below the RL and above the MDL; ND= Not Detected; NA= Not Applicable.

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Organophosphorus Pesticides

Client: *MWH Laboratories* **CRG Project ID:** *2402gh*

CRG ID#:	*21617*	**Sample Description:**	2412090049 Site 4 Haines Canyon Creek 1	**Date Sampled:**	09-Dec-04 10:30
Replicate #:	R1		Project #139542 / PO #99-15489	**Date Received:**	09-Dec-04
Batch ID:	2402-12044	**Matrix:**	Wastewater	**Date Processed:**	14-Dec-04
Instrument:	GC/MS #2 Shimadzu QP2010	**Analyst:**	D. Gonsman	**Date Analyzed:**	22-Dec-04

CONSTITUENT	FRACTION	METHOD	RESULT	UNITS	MDL	RL	DILUTION FACTOR	ACCEPTANCE RANGE
(PCB030)	Total	EPA 625	94	% Recovery			1	46 - 119%
(PCB112)	Total	EPA 625	94	% Recovery			1	52 - 123%
(PCB198)	Total	EPA 625	99	% Recovery			1	59 - 123%
(TCMX)	Total	EPA 625	94	% Recovery			1	40 - 110%
Bolstar (Sulprofos)	Total	EPA 625	ND	ng/L	10	20	1	NA
Chlorpyrifos	Total	EPA 625	ND	ng/L	5	10	1	NA
Demeton	Total	EPA 625	ND	ng/L	10	20	1	NA
Diazinon	Total	EPA 625	ND	ng/L	5	10	1	NA
Dichlorvos	Total	EPA 625	ND	ng/L	10	20	1	NA
Dimethoate	Total	EPA 625	ND	ng/L	5	10	1	NA
Disulfoton	Total	EPA 625	ND	ng/L	10	20	1	NA
Ethoprop (Ethoprofos)	Total	EPA 625	ND	ng/L	10	20	1	NA
Fenchlorophos (Ronnel)	Total	EPA 625	ND	ng/L	10	20	1	NA
Fensulfothion	Total	EPA 625	ND	ng/L	10	20	1	NA
Fenthion	Total	EPA 625	ND	ng/L	10	20	1	NA
Malathion	Total	EPA 625	ND	ng/L	5	10	1	NA
Merphos	Total	EPA 625	ND	ng/L	10	20	1	NA
Methyl Parathion	Total	EPA 625	ND	ng/L	10	20	1	NA
Mevinphos (Phosdrin)	Total	EPA 625	ND	ng/L	10	20	1	NA
Phorate	Total	EPA 625	ND	ng/L	10	20	1	NA

MDL= Method Detection Limit (CFR 40 Part 136); RL= Minimum Level (SWRCB); E= Estimated Value below the RL and above the MDL; ND= Not Detected; NA= Not Applicable.

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Organophosphorus Pesticides

Client: *MWH Laboratories* **CRG Project ID:** *2402gh*

CRG ID#:	*21617*	**Sample Description:**	2412090049 Site 4 Haines Canyon Creek 1	**Date Sampled:**	09-Dec-04	10:30
Replicate #:	R1		Project #139542 / PO #99-15489	**Date Received:**	09-Dec-04	
Batch ID:	2402-12044	**Matrix:**	Wastewater	**Date Processed:**	14-Dec-04	
Instrument:	GC/MS #2 Shimadzu QP2010	**Analyst:**	D. Gonsman	**Date Analyzed:**	22-Dec-04	

CONSTITUENT	FRACTION	METHOD	RESULT	UNITS	MDL	RL	DILUTION FACTOR	ACCEPTANCE RANGE
Tetrachlorvinphos (Stirofos)	Total	EPA 625	ND	ng/L	10	20	1	NA
Tokuthion	Total	EPA 625	ND	ng/L	10	20	1	NA
Trichloronate	Total	EPA 625	ND	ng/L	10	20	1	NA

MDL= Method Detection Limit (CFR 40 Part 136); RL= Minimum Level (SWRCB); E= Estimated Value below the RL and above the MDL; ND= Not Detected; NA= Not Applicable.

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Organophosphorus Pesticides

Client: *MWH Laboratories* **CRG Project ID:** *2402gh*

CRG ID#:	*21618*	**Sample Description:**	2412090050 Site 4 Haines Canyon Creek 2	**Date Sampled:**	09-Dec-04 10:40
Replicate #:	R1		Project #139542 / PO #99-15489	**Date Received:**	09-Dec-04
Batch ID:	2402-12044	**Matrix:**	Wastewater	**Date Processed:**	14-Dec-04
Instrument:	GC/MS #2 Shimadzu QP2010	**Analyst:**	D. Gonsman	**Date Analyzed:**	22-Dec-04

CONSTITUENT	FRACTION	METHOD	RESULT	UNITS	MDL	RL	DILUTION FACTOR	ACCEPTANCE RANGE
(PCB030)	Total	EPA 625	92	% Recovery			1	46 - 119%
(PCB112)	Total	EPA 625	97	% Recovery			1	52 - 123%
(PCB198)	Total	EPA 625	99	% Recovery			1	59 - 123%
(TCMX)	Total	EPA 625	93	% Recovery			1	40 - 110%
Bolstar (Sulprofos)	Total	EPA 625	ND	ng/L	10	20	1	NA
Chlorpyrifos	Total	EPA 625	ND	ng/L	5	10	1	NA
Demeton	Total	EPA 625	ND	ng/L	10	20	1	NA
Diazinon	Total	EPA 625	ND	ng/L	5	10	1	NA
Dichlorvos	Total	EPA 625	ND	ng/L	10	20	1	NA
Dimethoate	Total	EPA 625	ND	ng/L	5	10	1	NA
Disulfoton	Total	EPA 625	ND	ng/L	10	20	1	NA
Ethoprop (Ethoprofos)	Total	EPA 625	ND	ng/L	10	20	1	NA
Fenchlorophos (Ronnel)	Total	EPA 625	ND	ng/L	10	20	1	NA
Fensulfothion	Total	EPA 625	ND	ng/L	10	20	1	NA
Fenthion	Total	EPA 625	ND	ng/L	10	20	1	NA
Malathion	Total	EPA 625	ND	ng/L	5	10	1	NA
Merphos	Total	EPA 625	ND	ng/L	10	20	1	NA
Methyl Parathion	Total	EPA 625	ND	ng/L	10	20	1	NA
Mevinphos (Phosdrin)	Total	EPA 625	ND	ng/L	10	20	1	NA
Phorate	Total	EPA 625	ND	ng/L	10	20	1	NA

MDL= Method Detection Limit (CFR 40 Part 136); RL= Minimum Level (SWRCB); E= Estimated Value below the RL and above the MDL; ND= Not Detected; NA= Not Applicable.

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Organophosphorus Pesticides

Client: ***MWH Laboratories*** **CRG Project ID:** ***2402gh***

CRG ID#:	***21618***	**Sample Description:**	2412090050	Site 4 Haines Canyon Creek 2	**Date Sampled:**	09-Dec-04	10:40
Replicate #:	R1		Project #139542 / PO #99-15489		**Date Received:**	09-Dec-04	
Batch ID:	2402-12044	**Matrix:**	Wastewater		**Date Processed:**	14-Dec-04	
Instrument:	GC/MS #2 Shimadzu QP2010	**Analyst:**	D. Gonsman		**Date Analyzed:**	22-Dec-04	

CONSTITUENT	FRACTION	METHOD	RESULT	UNITS	MDL	RL	DILUTION FACTOR	ACCEPTANCE RANGE
Tetrachlorvinphos (Stirofos)	Total	EPA 625	ND	ng/L	10	20	1	NA
Tokuthion	Total	EPA 625	ND	ng/L	10	20	1	NA
Trichloronate	Total	EPA 625	ND	ng/L	10	20	1	NA

MDL= Method Detection Limit (CFR 40 Part 136); RL= Minimum Level (SWRCB); E= Estimated Value below the RL and above the MDL; ND= Not Detected; NA= Not Applicable.

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Organophosphorus Pesticides

Client: *MWH Laboratories* **CRG Project ID:** *2402gh*

CRG ID#:	*21619*	**Sample Description:**	2412090051 Site 3 Big TJ Wash 1	**Date Sampled:**	09-Dec-04	13:10
Replicate #:	R1		Project #139542 / PO #99-15489	**Date Received:**	09-Dec-04	
Batch ID:	2402-12044	**Matrix:**	Wastewater	**Date Processed:**	14-Dec-04	
Instrument:	GC/MS #2 Shimadzu QP2010	**Analyst:**	D. Gonsman	**Date Analyzed:**	22-Dec-04	

CONSTITUENT	FRACTION	METHOD	RESULT	UNITS	MDL	RL	DILUTION FACTOR	ACCEPTANCE RANGE
(PCB030)	Total	EPA 625	93	% Recovery			1	46 - 119%
(PCB112)	Total	EPA 625	94	% Recovery			1	52 - 123%
(PCB198)	Total	EPA 625	98	% Recovery			1	59 - 123%
(TCMX)	Total	EPA 625	95	% Recovery			1	40 - 110%
Bolstar (Sulprofos)	Total	EPA 625	ND	ng/L	10	20	1	NA
Chlorpyrifos	Total	EPA 625	ND	ng/L	5	10	1	NA
Demeton	Total	EPA 625	ND	ng/L	10	20	1	NA
Diazinon	Total	EPA 625	ND	ng/L	5	10	1	NA
Dichlorvos	Total	EPA 625	ND	ng/L	10	20	1	NA
Dimethoate	Total	EPA 625	ND	ng/L	5	10	1	NA
Disulfoton	Total	EPA 625	ND	ng/L	10	20	1	NA
Ethoprop (Ethoprofos)	Total	EPA 625	ND	ng/L	10	20	1	NA
Fenchlorophos (Ronnel)	Total	EPA 625	ND	ng/L	10	20	1	NA
Fensulfothion	Total	EPA 625	ND	ng/L	10	20	1	NA
Fenthion	Total	EPA 625	ND	ng/L	10	20	1	NA
Malathion	Total	EPA 625	ND	ng/L	5	10	1	NA
Merphos	Total	EPA 625	ND	ng/L	10	20	1	NA
Methyl Parathion	Total	EPA 625	ND	ng/L	10	20	1	NA
Mevinphos (Phosdrin)	Total	EPA 625	ND	ng/L	10	20	1	NA
Phorate	Total	EPA 625	ND	ng/L	10	20	1	NA

MDL= Method Detection Limit (CFR 40 Part 136); RL= Minimum Level (SWRCB); E= Estimated Value below the RL and above the MDL; ND= Not Detected; NA= Not Applicable.

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Organophosphorus Pesticides

Client: *MWH Laboratories* **CRG Project ID:** *2402gh*

CRG ID#:	*21619*	**Sample Description:**	2412090051 Site 3 Big TJ Wash 1	**Date Sampled:**	09-Dec-04 13:10
Replicate #:	R1		Project #139542 / PO #99-15489	**Date Received:**	09-Dec-04
Batch ID:	2402-12044	**Matrix:**	Wastewater	**Date Processed:**	14-Dec-04
Instrument:	GC/MS #2 Shimadzu QP2010	**Analyst:**	D. Gonsman	**Date Analyzed:**	22-Dec-04

CONSTITUENT	FRACTION	METHOD	RESULT	UNITS	MDL	RL	DILUTION FACTOR	ACCEPTANCE RANGE
Tetrachlorvinphos (Stirofos)	Total	EPA 625	ND	ng/L	10	20	1	NA
Tokuthion	Total	EPA 625	ND	ng/L	10	20	1	NA
Trichloronate	Total	EPA 625	ND	ng/L	10	20	1	NA

MDL= Method Detection Limit (CFR 40 Part 136); RL= Minimum Level (SWRCB); E= Estimated Value below the RL and above the MDL; ND= Not Detected; NA= Not Applicable.

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Organophosphorus Pesticides

Client: *MWH Laboratories* **CRG Project ID:** *2402gh*

CRG ID#:	*21620*	**Sample Description:**	2412090052 Site 3 Big TJ Wash 2	**Date Sampled:**	09-Dec-04 13:15
Replicate #:	R1		Project #139542 / PO #99-15489	**Date Received:**	09-Dec-04
Batch ID:	2402-12044	**Matrix:**	Wastewater	**Date Processed:**	14-Dec-04
Instrument:	GC/MS #2 Shimadzu QP2010	**Analyst:**	D. Gonsman	**Date Analyzed:**	22-Dec-04

CONSTITUENT	FRACTION	METHOD	RESULT	UNITS	MDL	RL	DILUTION FACTOR	ACCEPTANCE RANGE
(PCB030)	Total	EPA 625	88	% Recovery			1	46 - 119%
(PCB112)	Total	EPA 625	87	% Recovery			1	52 - 123%
(PCB198)	Total	EPA 625	92	% Recovery			1	59 - 123%
(TCMX)	Total	EPA 625	89	% Recovery			1	40 - 110%
Bolstar (Sulprofos)	Total	EPA 625	ND	ng/L	10	20	1	NA
Chlorpyrifos	Total	EPA 625	ND	ng/L	5	10	1	NA
Demeton	Total	EPA 625	ND	ng/L	10	20	1	NA
Diazinon	Total	EPA 625	ND	ng/L	5	10	1	NA
Dichlorvos	Total	EPA 625	ND	ng/L	10	20	1	NA
Dimethoate	Total	EPA 625	ND	ng/L	5	10	1	NA
Disulfoton	Total	EPA 625	ND	ng/L	10	20	1	NA
Ethoprop (Ethoprofos)	Total	EPA 625	ND	ng/L	10	20	1	NA
Fenchlorophos (Ronnel)	Total	EPA 625	ND	ng/L	10	20	1	NA
Fensulfothion	Total	EPA 625	ND	ng/L	10	20	1	NA
Fenthion	Total	EPA 625	ND	ng/L	10	20	1	NA
Malathion	Total	EPA 625	ND	ng/L	5	10	1	NA
Merphos	Total	EPA 625	ND	ng/L	10	20	1	NA
Methyl Parathion	Total	EPA 625	ND	ng/L	10	20	1	NA
Mevinphos (Phosdrin)	Total	EPA 625	ND	ng/L	10	20	1	NA
Phorate	Total	EPA 625	ND	ng/L	10	20	1	NA

MDL= Method Detection Limit (CFR 40 Part 136); RL= Minimum Level (SWRCB); E= Estimated Value below the RL and above the MDL; ND= Not Detected; NA= Not Applicable.

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Organophosphorus Pesticides

Client: *MWH Laboratories* **CRG Project ID:** *2402gh*

CRG ID#:	*21620*	**Sample Description:**	2412090052 Site 3 Big TJ Wash 2	**Date Sampled:**	09-Dec-04 13:15
Replicate #:	R1		Project #139542 / PO #99-15489	**Date Received:**	09-Dec-04
Batch ID:	2402-12044	**Matrix:**	Wastewater	**Date Processed:**	14-Dec-04
Instrument:	GC/MS #2 Shimadzu QP2010	**Analyst:**	D. Gonsman	**Date Analyzed:**	22-Dec-04

CONSTITUENT	FRACTION	METHOD	RESULT	UNITS	MDL	RL	DILUTION FACTOR	ACCEPTANCE RANGE
Tetrachlorvinphos (Stirofos)	Total	EPA 625	ND	ng/L	10	20	1	NA
Tokuthion	Total	EPA 625	ND	ng/L	10	20	1	NA
Trichloronate	Total	EPA 625	ND	ng/L	10	20	1	NA

MDL= Method Detection Limit (CFR 40 Part 136); RL= Minimum Level (SWRCB); E= Estimated Value below the RL and above the MDL; ND= Not Detected; NA= Not Applicable.

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QUALITY CONTROL REPORT

PROCEDURAL BLANK RESULTS

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Organophosphorus Pesticides

Client: *MWH Laboratories* **CRG Project ID:** *2402gh*

CRG ID#:	*21612*	**Sample Description:**	QAQC Procedural Blank	**Date Sampled:**	
Replicate #:	B1			**Date Received:**	
Batch ID:	2402-12044	**Matrix:**	DI Water	**Date Processed:**	14-Dec-04
Instrument:	GC/MS #2 Shimadzu QP2010	**Analyst:**	D. Gonsman	**Date Analyzed:**	22-Dec-04

CONSTITUENT	FRACTION	METHOD	RESULT	UNITS	MDL	RL	DILUTION FACTOR	ACCEPTANCE RANGE
(PCB030)	Total	EPA 625	83	% Recovery			1	46 - 119%
(PCB112)	Total	EPA 625	100	% Recovery			1	52 - 123%
(PCB198)	Total	EPA 625	99	% Recovery			1	59 - 123%
(TCMX)	Total	EPA 625	82	% Recovery			1	40 - 110%
Bolstar (Sulprofos)	Total	EPA 625	ND	ng/L	10	20	1	NA
Chlorpyrifos	Total	EPA 625	ND	ng/L	5	10	1	NA
Demeton	Total	EPA 625	ND	ng/L	10	20	1	NA
Diazinon	Total	EPA 625	ND	ng/L	5	10	1	NA
Dichlorvos	Total	EPA 625	ND	ng/L	10	20	1	NA
Dimethoate	Total	EPA 625	ND	ng/L	5	10	1	NA
Disulfoton	Total	EPA 625	ND	ng/L	10	20	1	NA
Ethoprop (Ethoprofos)	Total	EPA 625	ND	ng/L	10	20	1	NA
Fenchlorophos (Ronnel)	Total	EPA 625	ND	ng/L	10	20	1	NA
Fensulfothion	Total	EPA 625	ND	ng/L	10	20	1	NA
Fenthion	Total	EPA 625	ND	ng/L	10	20	1	NA
Malathion	Total	EPA 625	ND	ng/L	5	10	1	NA
Merphos	Total	EPA 625	ND	ng/L	10	20	1	NA
Methyl Parathion	Total	EPA 625	ND	ng/L	10	20	1	NA
Mevinphos (Phosdrin)	Total	EPA 625	ND	ng/L	10	20	1	NA
Phorate	Total	EPA 625	ND	ng/L	10	20	1	NA

MDL= Method Detection Limit (CFR 40 Part 136); RL= Minimum Level (SWRCB); E= Estimated Value below the RL and above the MDL; ND= Not Detected; NA= Not Applicable.

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Organophosphorus Pesticides

Client: *MWH Laboratories* **CRG Project ID:** *2402gh*

CRG ID#:	*21612*	**Sample Description:**	QAQC Procedural Blank	**Date Sampled:**	
Replicate #:	B1			**Date Received:**	
Batch ID:	2402-12044	**Matrix:**	DI Water	**Date Processed:**	14-Dec-04
Instrument:	GC/MS #2 Shimadzu QP2010	**Analyst:**	D. Gonsman	**Date Analyzed:**	22-Dec-04

CONSTITUENT	FRACTION	METHOD	RESULT	UNITS	MDL	RL	DILUTION FACTOR	ACCEPTANCE RANGE
Tetrachlorvinphos (Stirofos)	Total	EPA 625	ND	ng/L	10	20	1	NA
Tokuthion	Total	EPA 625	ND	ng/L	10	20	1	NA
Trichloronate	Total	EPA 625	ND	ng/L	10	20	1	NA

MDL= Method Detection Limit (CFR 40 Part 136); RL= Minimum Level (SWRCB); E= Estimated Value below the RL and above the MDL; ND= Not Detected; NA= Not Applicable.

California ELAP Certificate # 2261

CHAIN OF CUSTODY

MWH Laboratories
A Division of MWH Americas,Inc.
750 Royal Oaks Drive Suite 100
Monrovia, CA 91016-3629
Ph (626) 386-1100 Fax (626) 386-1095

Date 12/09/04

Submittal Form & Purchase Order 99-15489

***REPORTING REQUIREMENTS: One report for this MWH Project Number: 139542**
Do Not Combine Report with any other samples submitted under different MWH project numbers!
Report & Invoice must have the MWH Project Number and Sub PO#: **99-15489**

Report all quality control data according to Method. Include dates analyzed, date extracted (if extracted) and Method reference on the report. Email by .pdf to Michael Lettona@mwhglobal.com or Fax results to 626-386-1095
Results must have Complete data & QC with Approval Signature.
See reverse side for List of Terms and Conditions

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

Reports & Invoices to: Michael Lettona Sub-contracting Administrator
EMAIL TO: Michael.Lettona@mwhglobal.com
MWH Laboratories 750 Royal Oaks Drive CA 91016
Phone (626) 386-1137 Fax (626) 386-1095

Ship To **Misty B. Mercier**
CRG MARINE

2020 Del Amo Blvd
Suite 200
Torrance, CA 90501-1206

(310) 533-5190 x106 Fax 310-533-5003

CRG P.O. 402gh

SID: 2163-2170

MWH Project #	Report Due:	Sub PO#
139542	12/25/04	99-15489

RPG

		Use MWH Lab # for ID	Client Sample ID for reference only	Analysis Requested	Date & Time	Matrix		Container
1	@DIAZEDD	2412090041	SITE 1 INFLOW TO TJ POND 1	DIAZINON & CHLORPYRIFOS by 625	12/09/04 11:40	ww	3	1L amber glass+ buffer+ascorbic+EDTA+DZU
2	@DIAZEDD	2412090045	SITE 1 INFLOW TO TJ POND 2	DIAZINON & CHLORPYRIFOS by 625	12/09/04 11:50	ww	3	1L amber glass+ buffer+ascorbic+EDTA+DZU
3	@DIAZEDD	2412090046	SITE 2 OUTFLOW FROM TJ POND	DIAZINON & CHLORPYRIFOS by 625	12/09/04 12:30	ww	3	1L amber glass+ buffer+ascorbic+EDTA+DZU
4	@DIAZEDD	2412090048	SITE 2 OUTFLOW FROM TJ POND	DIAZINON & CHLORPYRIFOS by 625	12/09/04 12:35	ww	3	1L amber glass+ buffer+ascorbic+EDTA+DZU
5	@DIAZEDD	2412090049	SITE 4 HAINES CANYON CREEK 1	DIAZINON & CHLORPYRIFOS by 625	12/09/04 10:30	ww	3	1L amber glass+ buffer+ascorbic+EDTA+DZU
6	@DIAZEDD	2412090050	SITE 4 HAINES CANYON CREEK 2	DIAZINON & CHLORPYRIFOS by 625	12/09/04 10:40	ww	3	1L amber glass+ buffer+ascorbic+EDTA+DZU
7	@DIAZEDD	2412090051	SITE 3 BIG TJ WASH 1	DIAZINON & CHLORPYRIFOS by 625	12/09/04 13:10	ww	3	1L amber glass+ buffer+ascorbic+EDTA+DZU
8	@DIAZEDD	2412090052	SITE 3 BIG TJ WASH 2	DIAZINON & CHLORPYRIFOS by 625	12/09/04 13:15	ww	3	1L amber glass+ buffer+ascorbic+EDTA+DZU

Relinquished by: Sample Control Date 12/09/04 Time 5:00 MUST HAVE NOTIFICAION IF TEMP IS GREATER THAN 6 OR LESS THAN 2 CELSIUS

Received by: Date 12/9/04 Time 1300

An Acknowledgement of Receipt is requested to attn: Dennis Faigal

CRG
Marine Laboratories, Inc.

COOLER 1 OF 1

SAMPLE RECEIPT FORM

CRG Project ID: P2407gh

CLIENT NAME: MWH

DATE RECEIVED: 12/10/04

TEMPERATURE	
6 °C	☑ BLUE ICE
	☐ WET ICE
	☐ NONE USED

COC	
☐	NOT INCLUDED
☑	INCLUDED
☑	SIGNED

SAMPLE MATRIX	
☑	LIQUID
☐	SOLID
☐	OTHER*

CONDITION OF SAMPLES UPON ARRIVAL

	YES	NO	NA
All sample containers intact and good condition	☑	☐	☐
All samples listed on COC present	☑	☐	☐
Sample ID on containers consistent with COC	☑	☐	☐
Correct containers used for analyses requested	☑	☐	☐
All samples received within analysis holding time	☑	☐	☐

*COMMENTS

COMPLETED BY

AI INITIALS

2020 Del Amo Boulevard Suite 200, Torrance, CA 90501 · (310) 533-5190 · FAX (310) 533-5003