

East San Joaquin Water Quality Coalition Annual Monitoring Report 2005

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Executive Summary of Data/Narrative

The East San Joaquin (ESJ) Water Quality Coalition watershed area includes Stanislaus, Merced, Tuolumne, Madera and Mariposa Counties and portions of Calaveras County. The watershed that drains into the Coalition area is bordered by the crest of the Sierra Nevada on the east and the San Joaquin River on the west and south, and the Stanislaus River on the north. There are four major tributaries in the watershed: Chowchilla River, Merced River, Tuolumne River and Stanislaus River. These rivers are all tributaries of the San Joaquin River and drain from east to west. The ESJ watershed area also includes within its boundaries six irrigation districts: Oakdale Irrigation District, Merced Irrigation District, Turlock Irrigation District, Modesto Irrigation District, Chowchilla Irrigation District and Madera Irrigation District.

The objectives of the ESJ monitoring program are to 1) characterize discharge from irrigated agriculture in the Coalition region, 2) identify locations at which water quality objectives are violated, 3) identify potential source(s) of the exceedances, and 4) implement management practices to eliminate the violations.

Six sites were originally proposed for sampling during the irrigation season of 2004 (Table 1). Two sites could not be sampled during the summer. Following discussions with Regional Board staff, the sample sites were reexamined and an expanded set of 12 sites were proposed for 2005. The proposed sites included 6 core sites at which sampling would continue throughout the life of the monitoring program, and a series of rotating sites that would be sampled for two years.

Sampling is conducted by Pacific Ecorisk, Inc., and the laboratories conducting the analyses are: 1) Pacific Ecorisk, Inc. which is responsible for water column toxicity testing and sediment toxicity testing, 2) APPL, Inc. which is responsible for pesticide analysis, and 3) BSK Laboratories, Inc which is responsible for color, turbidity, TDS, TOC, and *E. coli*.

Samples were collected at four sites (Merced River @ Santa Fe Drive, August Road Drain @ Crow's Landing, Duck Slough @ Gurr Road, and Dutchman's Creek @ Gurr Road) for three sampling events (July 31, 2004, August 31, 2004, and September 29, 2004). The following data were collected at each site: field measurements - temperature, dissolved oxygen, pH, and electrical conductivity; physical parameters - turbidity, color, pH, TOC, TDS, and *E. coli*; pesticides - diazinon, chlorpyrifos, esfenvalerate, permethrin, lambda-cyhalothrin, and cypermethrin; water column toxicity; and sediment toxicity (one event). Analytical methods are provided in Table 10.

Data tables for the three events are provided in Tables 9b (field measurements), 11a – 20 (physical parameters and pesticides), and 27-32 (toxicity).

Water quality objectives were exceeded in 18 tests (Table 38); Total Dissolved Solids – 4 exceedances, electrical conductivity – 3 exceedances, *E. coli* – 7 exceedances, and toxicity – 4 exceedances.

After sampling indicated toxicity from an unknown cause(s) at Merced River @ Santa Fe Drive on July 31, 2004 and August 31, 2004, the County Agricultural Commissioner and several local growers reported that because of easy access, the Merced River site is frequently used as a trash dump by local individuals and also serves as a dump-site for illegal production of methamphetamines. If we detect positive toxicity in future test results, the coalition will attempt to determine if the toxicity is a function of agricultural activities or dumping at the site. This will be accomplished by sampling at a site slightly upstream on private property where dumping could not occur. If the toxicity is a result of dumping at the Merced River at Santa Fe site, there should be no toxicity upstream. If the toxicity is the result of upstream agricultural activities, we should observe the toxicity in both samples. If toxicity is sufficient to trigger a TIE, we will institute procedures to remove metals from the sample to determine if metals are the cause. The remaining TIE procedures will be followed as they were last year.

In addition to modifying the testing procedures to be conducted next year, the ESJ Coalition is involved in an additional effort to identify and eliminate the source of the toxicity. First, to identify the potential sources, and assuming that metals might be the cause of the toxicity, we have requested all of the Pesticide Use Reports for the watersheds above the Duck Slough at Gurr Road site, and the Merced River at Santa Fe site.

Several exceedances of the *E. coli* standards were experienced during the summer in all three sampling events. There are numerous dairies in the Coalition region, and while it is possible that *E. coli* come from the dairies, sampling was unable to determine the source. If *E. coli* remains high at sites sampled during the 2005 irrigation season, we will sample upstream to identify the source of the coliforms.

Quality control was acceptable for physical parameters and most pesticide analyses. DECA and TCMX surrogate recoveries were low at ~70% and ~50% respectively, with one recovery below 20%. Recoveries of matrix spikes and matrix spike duplicates were generally high for Coalition analytes. Goals for the laboratory analyses include improvements on surrogate recoveries and upper and lower recovery percentages in the matrix spike.

The ESJWQ Coalition initiated a series of outreach meetings in the Coalition region in March 2005. The meetings, located in Merced (3-9-05), Madera (3-22-05) and Modesto (3-24-05), provided growers and crop advisors with updates on the monitoring results outlined above. Also presented was information on Best Management Practices to protect water quality for row crops and orchards, including detailed descriptions of label

changes for diazinon use as a dormant orchard spray. The goal of the meetings was to outline to growers and crop advisors the activities that the Coalition was responsible for performing as a follow up to monitoring of local waterways such as identification of sources and promotion of management measures to correct the problem. A total of 250 growers and crop advisors attended the three meetings.

Sampling Sites Description

Table 1. Monitoring sites selected for sampling during Phase I.

ID	SITE NAME	LATITUDE	LONGITUDE
Irrigation 2004			
ASA21	Ash Slough @ Ave 21	37.0544	-120.4157
ARDCL	August Road Drain @ Crows Landing	37.4311	-120.9937
DSAGR	Duck Slough @ Gurr Road	37.2142	-120.5595
DCAGR	Dutchman's Creek (Deadman Creek) @ Gurr Road	37.1936	-120.5612
MRSFD	Merced River @ Santa Fe Drive	37.4271	-120.6722
RSASJR	Riley Slough @ confluence of SJR	37.6589	-121.2327
Dormant 2005			
AsSIaV21	✓ Ash Slough @ Avenue 21	37.0545	-120.4158
BearCrKiRd	✓ Bear Creek @ Kiby Rd	37.3128	-120.4138
CoCrRd20	✓ Cottonwood Creek @ Road 20	36.8686	-120.1818
DrCrWiRd	✓ Dry Creek @ Wellsford Road	37.6602	-120.8743
DuSIGuRd	✓ Duck Slough @ Gurr Road	37.2142	-120.5596
DuSIPiRd	✓ Duck Slough @ Pioneer Road / <i>Highway 17</i>	37.2524	-120.3963
HiCaHw99	✓ Highline Canal @ Hwy 99	37.4153	-120.7557
HiCaLoAve	✓ Highline Canal @ Lombardy Ave	37.4556	-120.7207
HiDrCeAve	✓ Hilmar Drain @ Central Ave	37.3906	-120.9582
JoDrOaRd	✓ Jones Drain @ Oakdale Road	37.4495	-120.6007
LoWiSiMaAve	✓ Lone Willow Slough @ Madera Ave	36.8603	-120.3749
MeRiSaFe	✓ Merced River @ Santa Fe	37.4271	-120.6721
PrFIDrCrLaRd	✓ Prairie Flower Drain @ Crows Landing Road	37.4422	-121.0024

Six sites were originally proposed for sampling during the irrigation season of 2004 (Table 1). Ash Slough remained dry throughout the year, and Riley Slough maintained only a small amount of stagnant water. Neither were able to be sampled. Following discussions with Regional Board staff, the sample sites were reexamined and an expanded set of sites were proposed. The proposed sites included core sites at which sampling would continue throughout the life of the monitoring program, and a series of rotating sites that would be sampled for two years.

The ESJWQC proposed the following core sites (Table 1) in December 2004: Dry Creek @ Wellsford Road, Merced River @ Santa Fe, Highline Canal @ Lombardy Ave (dormant season only), Duck Slough @ Gurr Road, Ash Slough @ Avenue 21, Prairie Flower Drain @ Crows Landing Road, and Cottonwood Creek @ Road 20. The rationale for selecting these sites is that they represent irrigated agriculture from the northern to the southern edges and from the western to the eastern edges of the Coalition region. These sites represent natural water bodies and engineered drains and cover all of the major types of agriculture present in the Coalition region. Specific watershed crops and land use are provided in Tables 2-4.

Dry Creek @ Wellsford Road (13,655 acres) – This site is in the northern part of the Coalition region and drains a combination of field crops, deciduous nuts, and vineyards. Dry Creek drains into the Tuolumne River in Modesto and this site represents the closest accessible location to Modesto that collects agricultural drainage. There appear to be dairies upstream and the town of Waterford may provide some urban signal but the site appears to be sufficiently far from Waterford to be used as a core site.

Merced River @ Santa Fe (26,084 acres) – This site was sampled during the summer of 2004. Upstream agriculture includes some field crops in the immediate vicinity of the river and deciduous orchards, primarily almonds. This site integrates the signal from a relatively large area and will be one of the locations we use to measure improvement in water quality with upstream BMP implementation.

Highline Canal @ Lombardy Road (3,332 acres) – This site is proposed as a core site for the dormant season only. During the irrigation season, the canal may carry small volumes of agricultural return water, but the signal will be diluted due to the clean irrigation water carried by the canal. Dairies are located upstream and Mustang Creek, a major tributary during the winter storm season, passes immediately to the southeast of the Turlock Airport. However, it is anticipated that these will not distort the agriculture signal. The main agricultural crop upstream is almonds.

Duck Slough @ Gurr Road (9,885 acres) – Located west of Merced, the site drains field crops immediately upstream and deciduous nuts farther upstream. In addition, there is irrigated pasture upstream.

Ash Slough @ Avenue 21 (49,114 acres) – Agriculture upstream includes vineyards, field crops, and deciduous nuts. Ash Creek flows just north of Chowchilla but there appears to be a buffer of agricultural land between Ash Slough and Chowchilla. As is true with most sites, there are dairies located upstream.

Prairie Flower Drain @ Crows Landing Road (2,486 acres) – Several drains exist in the western portion of the Coalition region and we are proposing Prairie Flower Drain as a core monitoring site. Relative to other drains in this part of the Coalition region, Prairie Flower Drain is longer and appears to drain a larger number of parcels of irrigated agriculture. Numerous dairies and feedlots are located in this part of the Coalition region and this drain may receive runoff from several dairies immediately upstream. Upstream agriculture includes field crops such as alfalfa and silage corn.

Cottonwood Creek @ Road 20 (164,633 acres) – This site is at the very southern edge of the Coalition region in Madera County and the creek drains into the Eastside Bypass. The immediate upstream agriculture is vineyards and almonds farther to the east.

In addition to these core sites, the Coalition is proposing to monitoring sites on a rotating basis (see Table 1). The rationale for the selection of these sites include broadening the geographic coverage, adding sites relatively close to core sites to partition loads among subwatersheds, or adding sites along the same water body to determine relative loading of

constituents from upstream to downstream. All of these sampling strategies will allow the Coalition to better characterize discharge from irrigated agriculture and monitor the effectiveness of BMP implementation. Maps for all monitoring sites in Table 1 are provided as an appendix to the Monitoring Report.

Additional drains and small waterways are likely to be identified during the next several months as we more closely examine drainage maps for the coalition region. We anticipate that as we work closely with the Irrigation Districts in the Coalition region, that we will find additional sites that could be monitored by either the Coalition or the districts. If or when more drains are found, they will be reported and worked into the monitoring schedule during the next several years. Sites to be added in Phase II and beyond are provided in Tables 2-4. These tables contain a general breakdown of crops in the watershed. Maps for all sites are provided in Figures 1-10.

Table 2. Rotating monitoring sites for 2007-08 and rationale for each site. These sites are monitored in addition to the sites proposed above as the core sites.

2007-08	Rationale	Watershed Size in Acres	Crops in Watershed
Dry Creek @ Road 18	Geographic coverage	18,534	Vineyards, orchards
Owens Creek @ Kibby Road	Geographic coverage	5,528	Field crops, orchards
Silva Drain @ Meadow Drive	Subwatershed (Merced River) load partitioning	461	Orchards (almonds), field crops
Mustang Creek @ East Ave*	Subwatershed (Merced River) load partitioning	8,801	Orchards
Mattos Drain @ Range Road	Additional drain	1,802	Field crops
Black Rascal Creek @ Kibby road	Geographic coverage	2,,891	Field crops, orchards

*If the ESJWQC Proposition 40/50 proposal is funded, this site will be added in 2006 and maintained through 2007. Other sites will be shifted to other years after discussion with Regional Board Staff.

Table 3. Rotating monitoring sites for 2009-10 and rationale for each site. These sites are monitored in addition to the sites proposed above as the core sites.

2009-10	Rationale	Watershed Size in Acres	Crops in Watershed
Berenda Slough @ Dairyland Road	Geographic coverage	42,130	Field crops, orchards, vineyards
Mariposa Creek @ Simonson Way	Geographic coverage	526	Orchards
Deane Drain @ Gurr Road	Additional drain	4,,887	Field crops
Cavill Drain @ McGee Road	Additional drain	14,131	Field crops
Dutchman Creek @ Highway 99	Geographic coverage	9,213	Field crops, orchards
Cottonwood Creek @ Sixmile road	Geographic coverage	780	Field crops
Hatch Drain @ Monte Vista Ave	Additional drain	1,557	Field crops, orchards

Table 4. Rotating monitoring sites for 2011-12 and rationale for each site. These sites are monitored in addition to the sites proposed above as the core sites.

2011-2012	Rationale	Watershed Size in Acres	Crops in Watershed
Berenda Creek @ Road 19	Geographic coverage	20,845	Vineyards, orchards
Deadman Creek @ Highway 59	Geographic coverage	26,610	Field crops
Livingston Drain @ Robin Ave	Additional drain	2,874	Orchards
Western States Drain @ Central Ave	Additional drain	3,866	Field crops, orchards
Westport Drain @ Vivian Road	Additional drain	1,766	Field crops, orchards, vineyards

Figures 1-10. Maps of the Coalition region. Figures 1 and 2 are maps of the entire Coalition region of the 2004 irrigation season sites (Figure 1) and the 2005 dormant season sites (Figure 2). Remaining figures are smaller scale maps of the sites.

Tables 5-7. Acreages of various land use types in the watersheds selected for monitoring during the 2005 dormant season and the remaining sampling of the Phase I Waiver program. The land uses are designated as irrigated/non-irrigated, and within each watershed, the total length of the hydrologic features in meters is provided as the row labeled hydrology. Hydrology may be an important factor in explaining the results of the sampling.

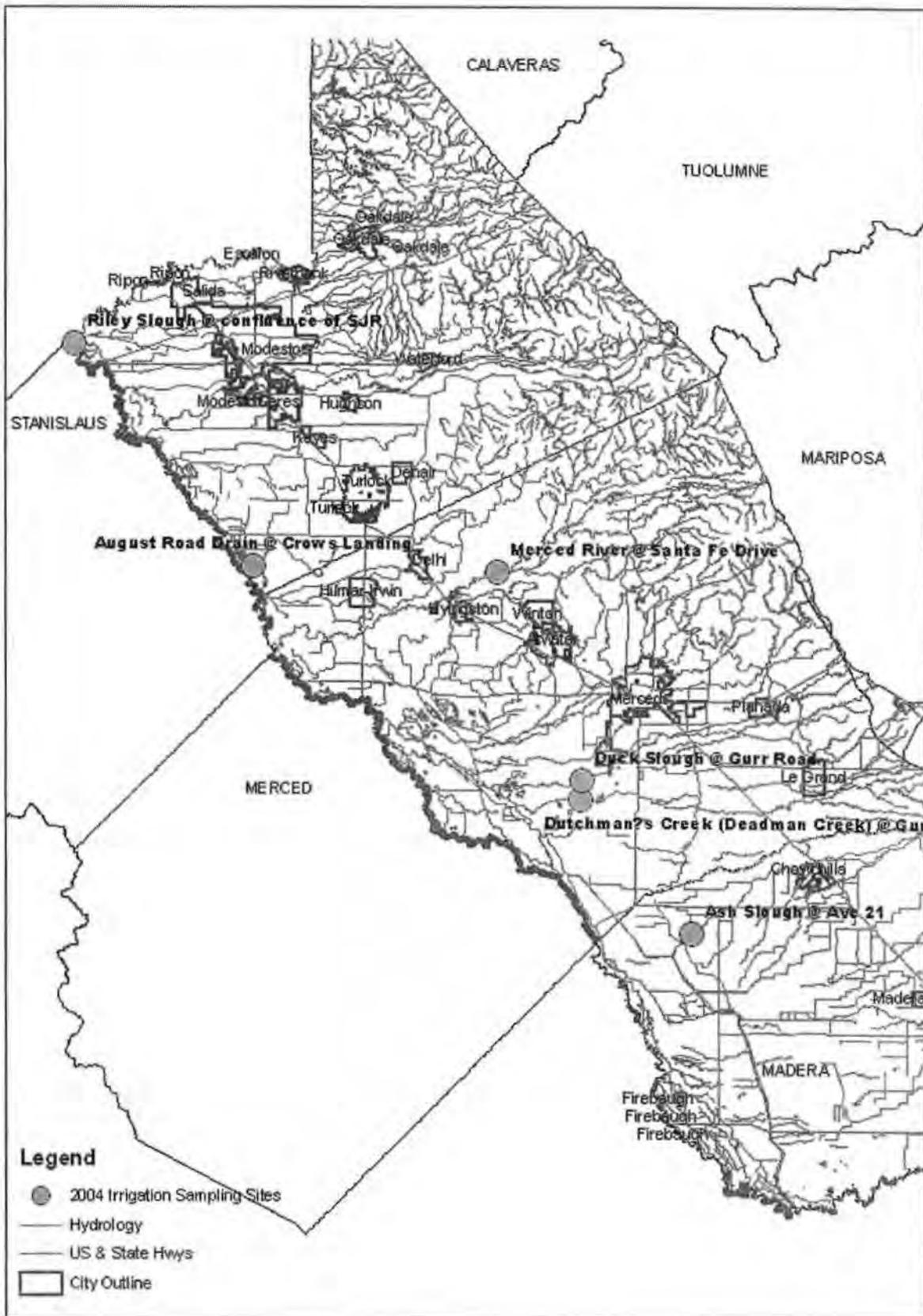
Land Use	I/NI	Bear Creek @ Kiby Rd.	Duck Slough @ Gurr Rd.	Duck Slough @ Pioneer Rd.	Highline Canal @ Lombardy	Highline Canal @ Hwy 99	Hilmar Drain @ Central Ave.	Jones Drain @ Oakdale Rd.	Merced River @ Santa Fe
Citrus	i	46.6							24.2
Deciduous Fruit & Nut	i	3,403.4	113.7	3,105.9	1,560.5	2,299.7	17.0	1,209.1	10,985.8
Field Crops	i	738.3	2,056.2	460.6	182.5	14.7	864.8	289.6	3,845.8
Grains & Hay	i	144.7	734.1	532.1		99.3			707.6
Grains & Hay	n								161.1
Idle	i	72.1	373.7	170.6	23.2	48.6		370.9	493.2
Wild Vegetation	n	164.8	1,451.5	648.0	255.1	47.0	6.3	88.8	2,116.3
Water Surface	n		538.7	7.4		6.4	4.5		52.0
Pasture	i	923.0	3,588.3	831.0	915.5	6.3	622.6	252.6	3,747.4
Rice	i		721.8						
Feedlot & Dairy	n	87.9	242.0	136.0	65.4	79.2	86.4	46.9	725.4
Truck, Nursery & Berry	i	951.3		760.8		128.9			229.7
Urban	n		65.4	190.3	98.4	149.3		102.006	251.3
Golfcourse, Cemetery, Landscaping	n			2.1					17.8
Vineyard	i				231.4	324.0		17.6	2,725.9
Total acres		6,531.9	9,885.4	6,844.7	3,332.1	3,203.4	1,601.7	2,377.4	26,083.5
hydrology		28,036.4	43,686.1	31,234.6	12,844.3	6,547.2	2,505.0	6,493.4	162,288.4

Table 6.

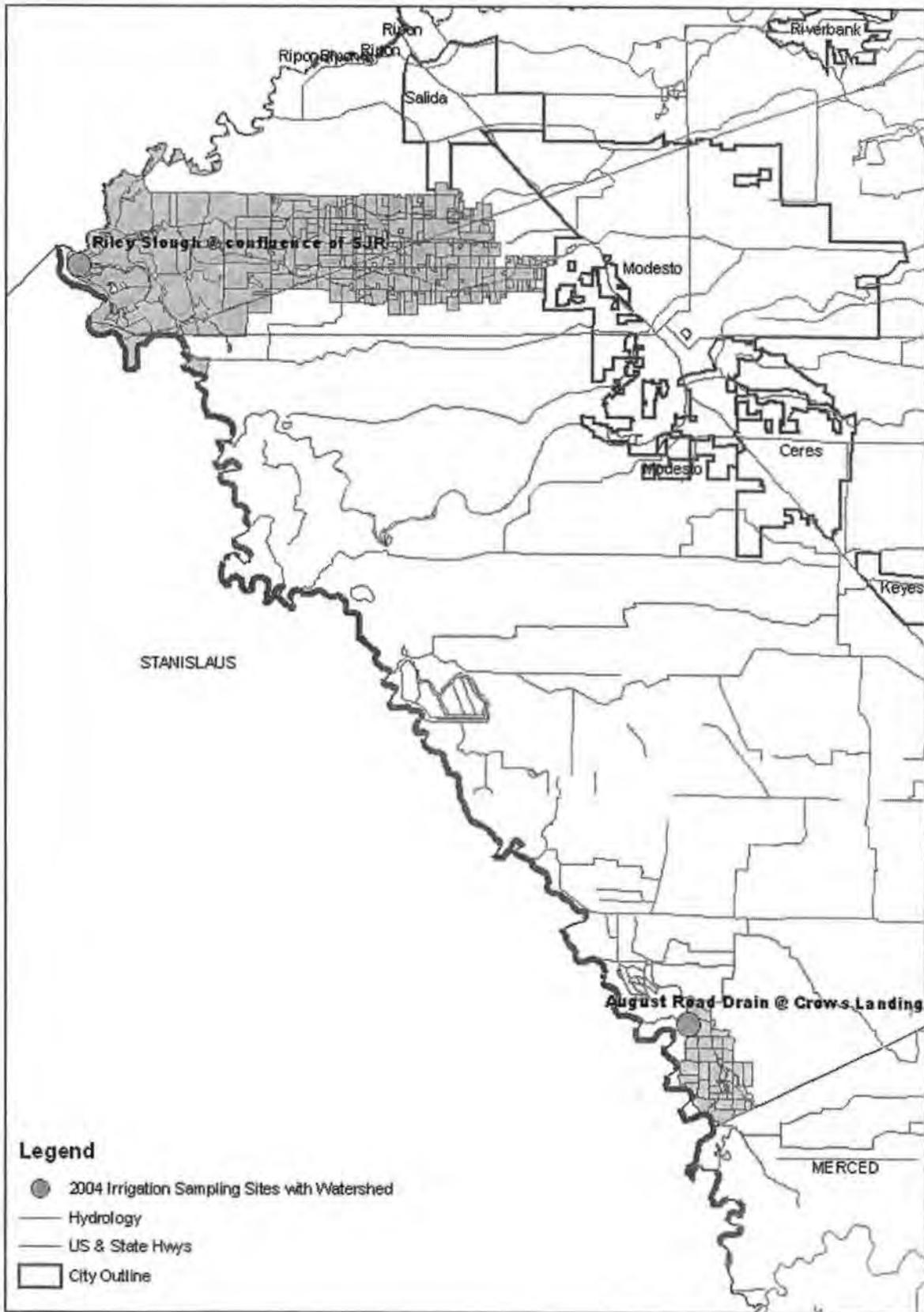
Land Use	I/NI	Dry Creek @ Wellsford Rd	Prairie Flower Drain @ Crows Landing Rd.
Citrus	i	37.1	
Deciduous Fruit & Nut	i	3,048.0	53.0
Field Crops	i	2,498.0	2,183.9
Grains & Hay	i		43.4
Grains & Hay	n	48.6	
Idle	i	113.6	
Wild Vegetation	n	20,761.4	3.0
Water Surface	n	47.8	12.3
Pasture	i	5,692.8	1,692.4
Rice	i	248.5	
Feedlot & Dairy	n	590.0	316.4
Truck, Nursery & Berry	i		129.8
Urban	n	157.5	55.6
Golfcourse, Cemetery, Landscaping	n		
Vineyard	i	472.3	
Total acres		33,715.5	4,489.8
hydrology		102,667.5	23,923.2

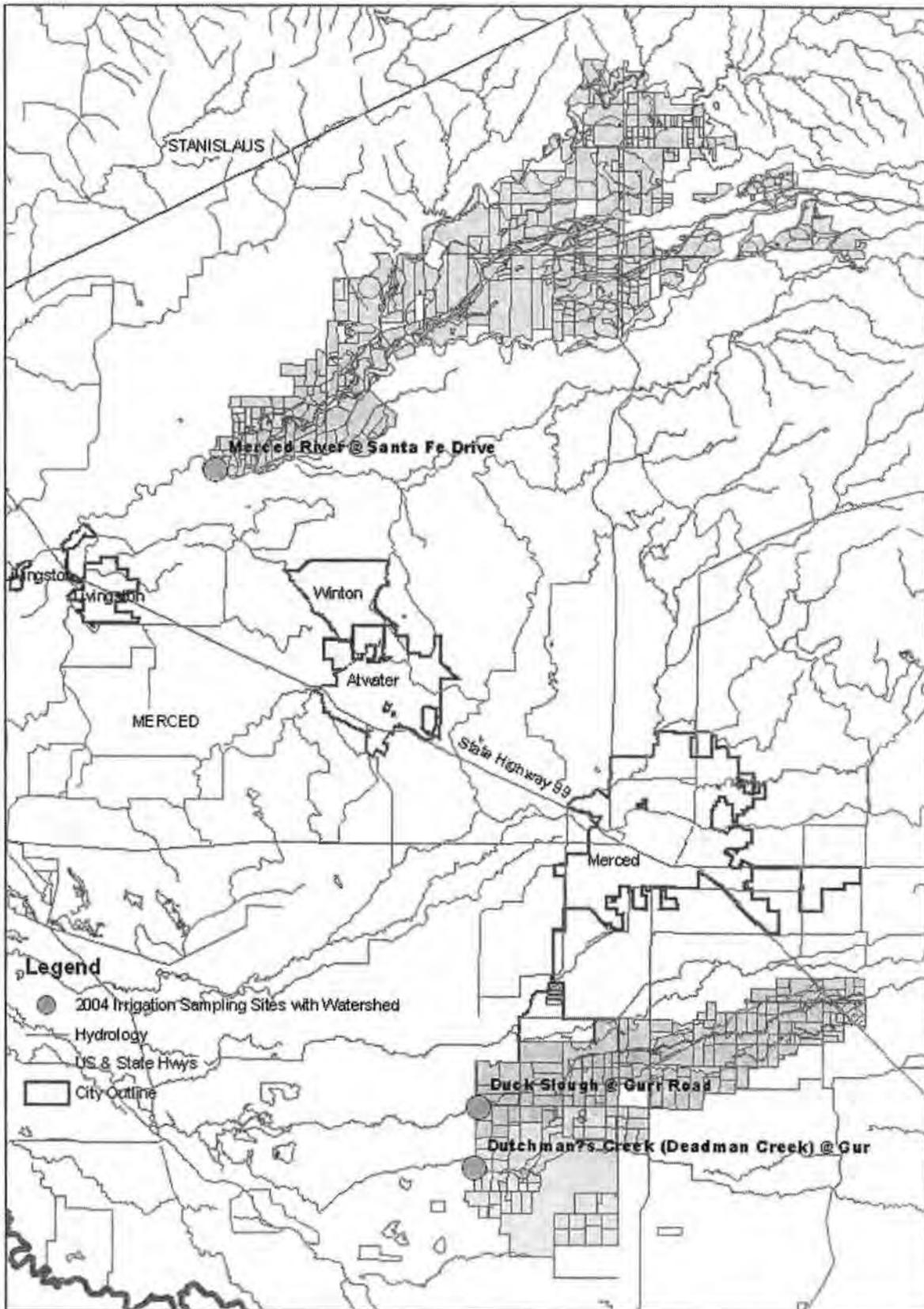
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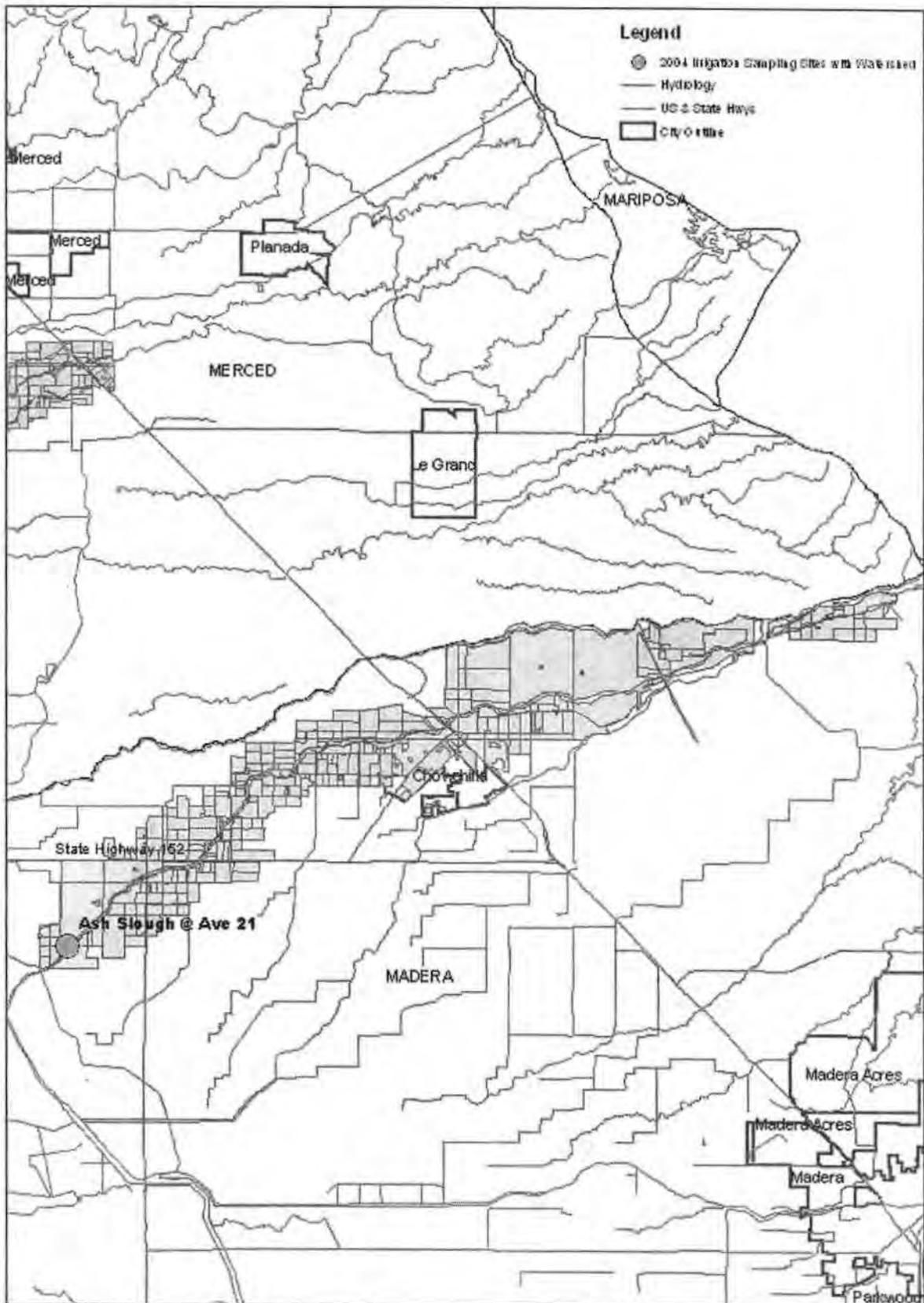
Land Use	I/N I	Ash Slough @ Ave. 21	Cottonwood Creek @ Rd. 20	Lone Willow Slough @ Madera Ave.
Citrus	i		1,330.6	
Deciduous Fruit & Nut	i	4,535.7	11,139.4	143.4
Field Crops	i	4,233.9	5,391.1	5,197.6
Grains & Hay	j	1,777.9	994.1	898.3
Grains & Hay	n	586.9	1,144.6	
Idle	i	1,841.3	1,253.8	99.7
Wild Vegetation	n	23,460.3	40,942.3	400.4
Water Surface	n		419.3	
Pasture	j	2,906.6	707.5	1,672.3
Rice	i			140.1
Feedlot & Dairy	n	204.2	651.9	4.4
Truck, Nursery & Berry	i	193.4	244.0	853.0
Urban	n	3,829.6	7,904.9	236.137
Golfcourse, Cemetery, Landscaping	n	18.2	146.5	
Vineyard	j	5,526.1	92,363.1	276.7
Total acres		49,114.1	164,633.1	9,922.1
hydrology		77,091.7	218,200.4	32,596.6

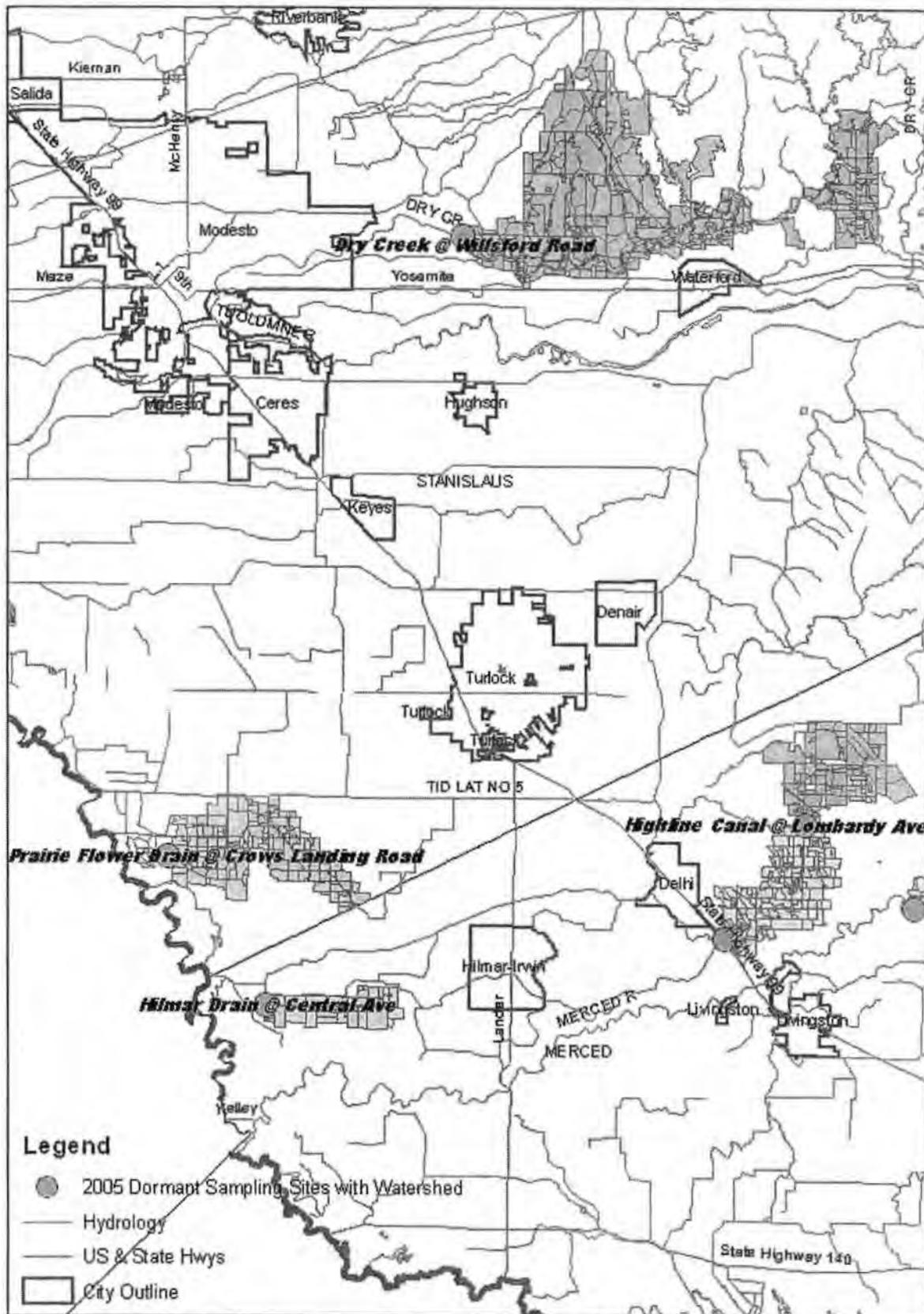


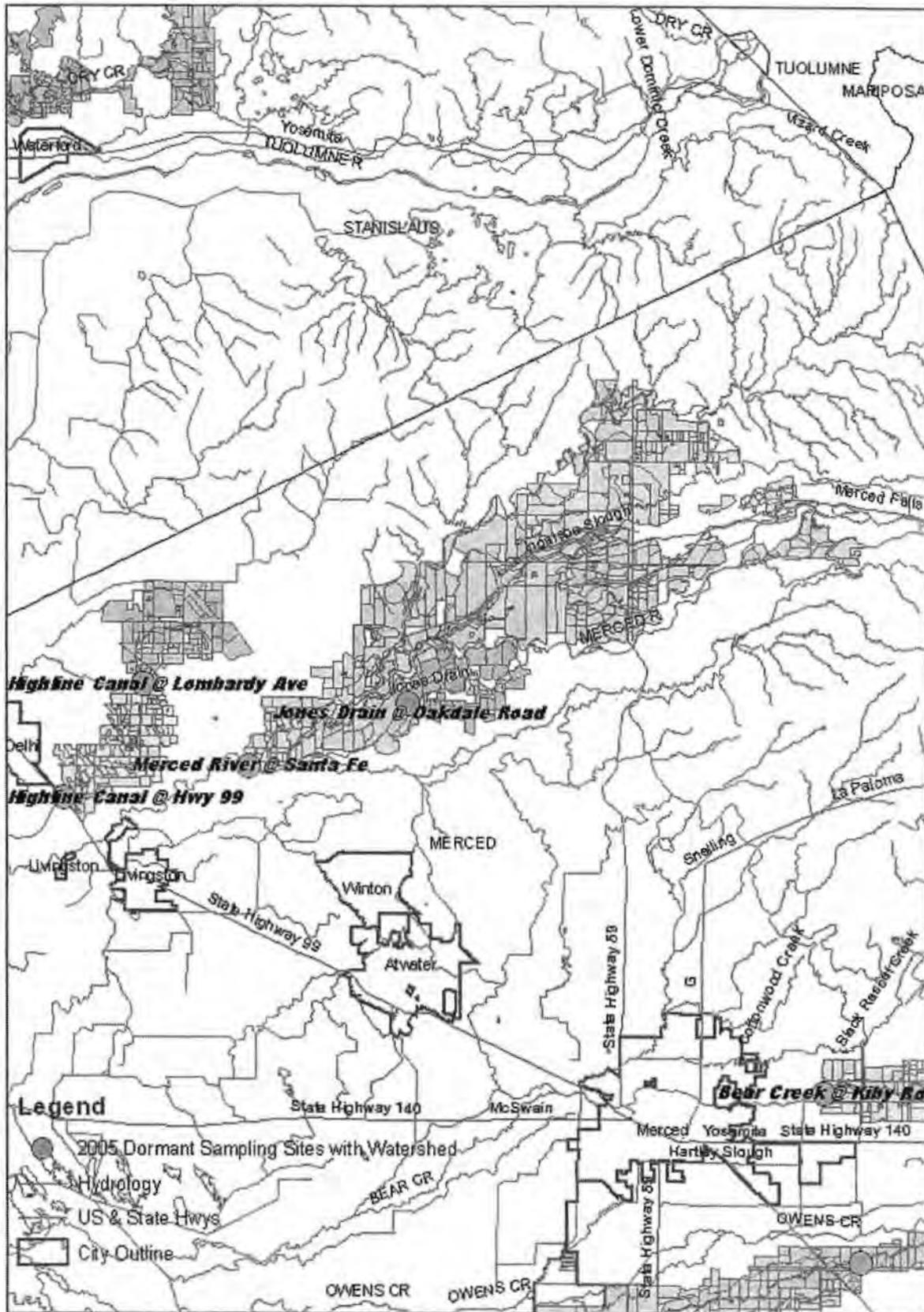


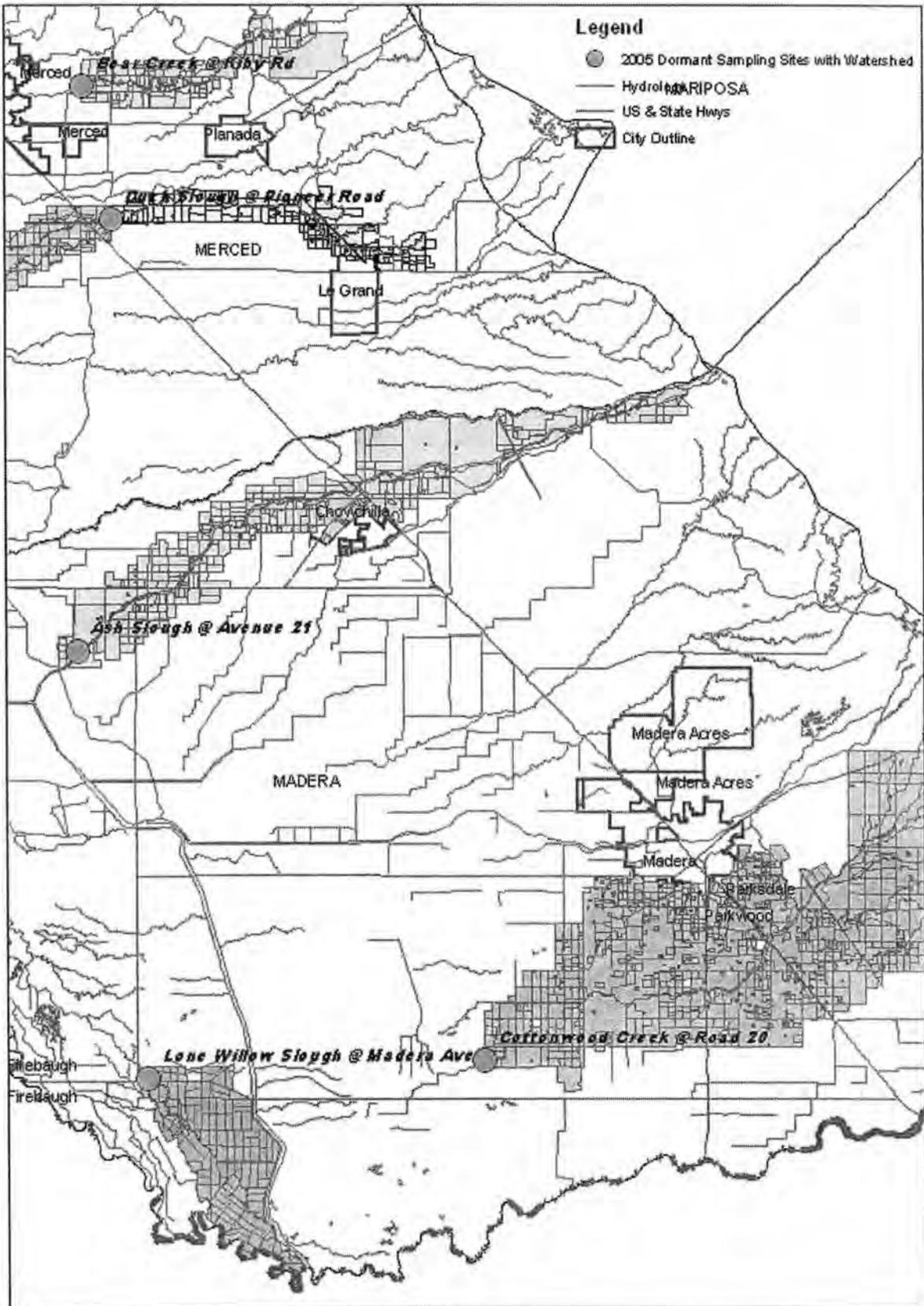


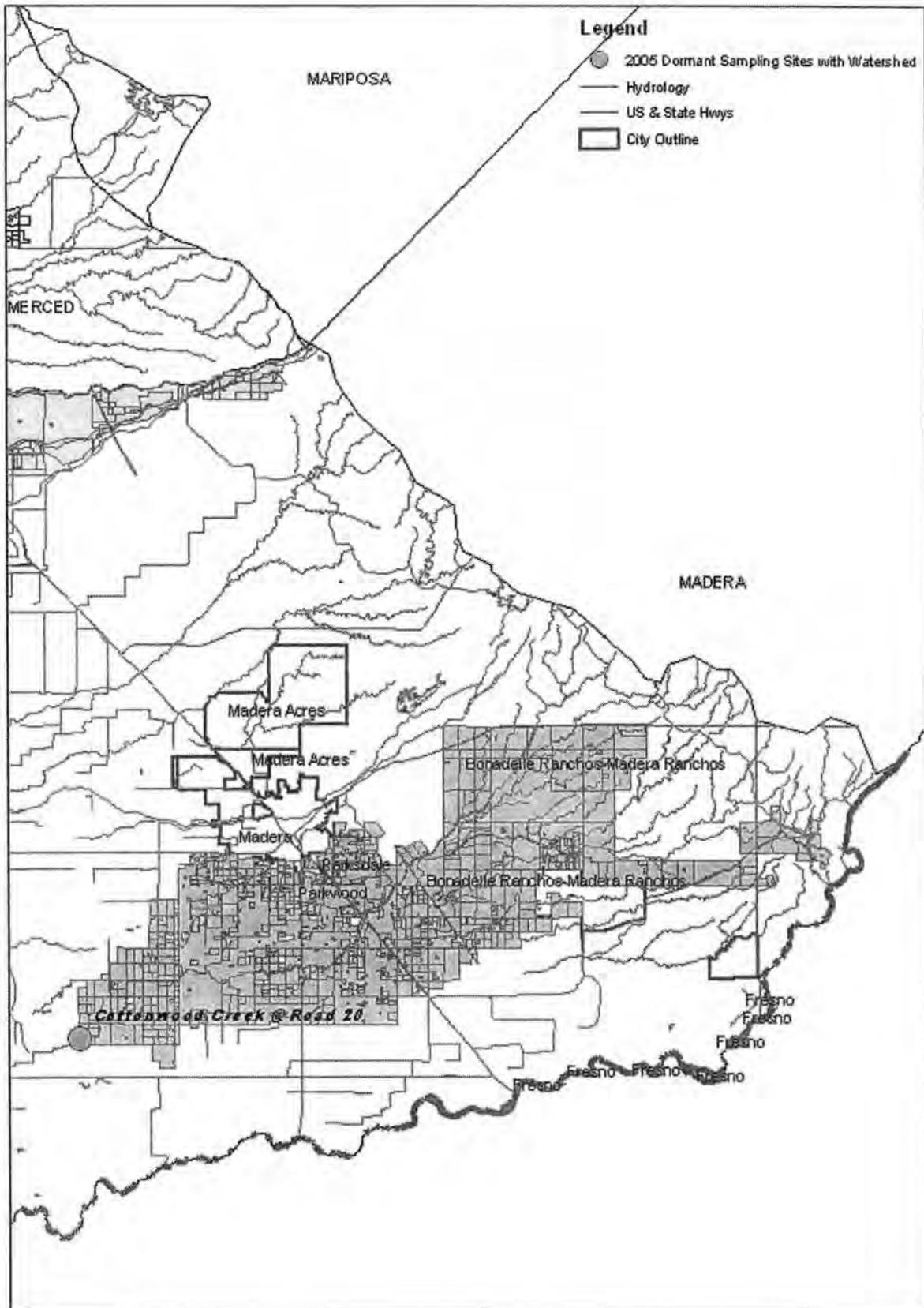












Parcel Information, Crops, Pesticide Use, and Management Practices for Watersheds

The Coalition is in the process of obtaining parcel level information from the counties within the Coalition region. Each county handles the release of the information differently. Stanislaus and Calaveras Counties make the information available on their websites. Merced, Mariposa, Tuolumne, and Madera Counties charge a fee for the transfer of the information, or information can be purchased from a private vendor. We have obtained data from Stanislaus and Calaveras Counties, and expect to have the remaining parcel level data from the entire Coalition region by August 2005.

Currently we have information on crop acreages by watersheds from the Department of Water Resources database. These data are several years old and we are attempting to update our crop data through county records. We have requested Pesticide Use Reports (PUR) from all counties in the Coalition region from the period July 2004 through February 2005. Some of those data have arrived but the bulk of those data will be delivered in early April. The databases that have arrived are extremely large. The databases for each county can be tens of thousands of lines long, each line a separate application. Searching these data is difficult. Additionally, the PURs are filed by township-range-section, not by parcel. Consequently, it is often difficult to assign a specific pesticide application to a parcel within a section of land. Finally, on the PUR entries, common name, trade name, or chemical number are used to reference a single chemical. Translating the data into a single format is slowing the process of assigning chemicals to parcels. The Coalition is developing an inventory of crops by fields, BMPs used on those crops, and the location of any field drains that can be identified. An example of pesticide use for a single watershed is provided in Table 8.

Table 8. Pesticide use data for Ash Slough @ Ave 21 watershed (Madera County). Data in the table come from PURs from 7/31/2004 to 2/16/2005. Data provided in amount of pesticide product used. The data will be broken down further to blocks of time immediately preceding sampling.

Chemical Name	Amount Product Used
Assail 70wp insecticide	23.68 LB
Assail brand 70wp insecticide	46.88 LB
Buctril	4.39 GA
Buctril 4 ec herbicide	2.48 GA
Butyrac 200 broadleaf herbicide	33 GA
Cayuse plus	429 QT
Champ formula 2 flowable	57 GA
Chlorpyrifos 4e ag	9287.13 GA
Comite	90.12 GA
Cottonquick	77.68 GA
Cottonquick cotton harvest aid/defoliant	126.173 GA
Def 6 emulsifiable defoliant very low od	28.25 GA
Direx 4l	390 PT
Drexel diuron 80 herbicide	160 LB
Du pont asana xl insecticide	33303 OZ
Du pont karmex df herbicide	144 LB
Du pont lannate insecticide	93 LB
Du pont velpar df herbicide	50.67 LB
Du pont vendex 50wp miticide	423 LB
Dusting sulfur	2800 LB
Echo 720 turf and ornamental fungicide	99.9 PT
Et herb/defoliant, nichino	6.748 GA
Farmsaver.com oryzalin 4 a.s.	73.87 GA
Finish brand 6 harvest aid for cotton	7.03 GA
First choice cotton defoliant concentrat	0.91 GA
Folex 6ec cotton defoliant	18.83 GA
Galigan 2e oxyfluorfen herbicide	573.88 GA
Gallery 75 dry flowable	8.89 LB
Ginstar ec	10.28 GA
Ginstar ec cotton defoliant	43.225 GA
Gly star original	71.6 PT
Glyfos bulk	30 GA
Glyfos herbicide	78.78 GA
Glyfos x-tra herbicide	3.82 GA
Goal 2xl	40677.14 PT
Gramoxone extra herbicide	341.03 GA
Gramoxone max	2010.53 GA
Imidan 70-wp	141.6 LB
Intrepid 2f	6 GA
Kocide 2000	5449.8 LB
Lock-on insecticide	19 GA
Lorsban 4e-hf	71.01 GA
M.a.p.co. 5 lb. Sodium chlorate defoliant	35 GA

Manex	60	QT
Nordox 75 wg	95	LB
Omite-6e	428	GA
Orchard star	39.16	PT
Permethrin 3.2 ag	124.63	GA
Poast	322.03	GA
Prep plant regulator for cotton (6 lb/ga	305.68	GA
Princep 4l	344.32	PT
Princep caliber 90 herbicide	546.8	LB
Prism herbicide	6	GA
Prokil malathion 8e	17.7	GA
Prowl 3.3 ec herbicide	24064	OZ
Pursuit w dg herbicide	11.793	OZ
Rally 40w agricultural fungicide in wate	240	OZ
Raptor herbicide	3.23	GA
Rely herbicide	3.2	GA
Renounce 20 wp insecticide	40	OZ
Roundup herbicide (withdrawn)	43.2	GA
Roundup original herbicide	444.75	GA
Roundup original max	392.5	GA
Roundup ultramax herbicide	16299.91	GA
Rovral 4 flowable	33.26	GA
Shark herbicide	10.471	LB
Simazine 90df	602.4	LB
Solicam df herbicide	877.95	LB
Surflan a.s.	2777.4	PT
Tenkoz buccaneer herbicide	74.9	GA
Tenkoz buccaneer plus herbicide	600.09	PT
Valent dibrom 8 emulsive	11.34	GA
Visor 2e	43.78	PT
Warrior insecticide	55.12	GA
Zephyr 0.15ec	18.46	GA

Field Procedure

All sampling procedures for the field were performed as outlined in the ESJWQC QAPP as amended on August 30, 2004. The SOP for field sampling is found in Appendix A (Supporting Documents for Chemical Water Quality Monitoring), Attachment 1: Ambient Water Sampling SOP, Attachment 2: Sediment Sampling SOP, and Attachment 3: Field Equipment Decontamination SOP. No changes to procedures outlined in the SOPs have been made. Employees of Pacific Ecorisk Inc. conduct all field sampling and are responsible for delivery of all samples to the analytical laboratories.

ESJRW FIELD SAMPLING DATA LOG SHEET: EVENT 01
Ag Waiver Program

Station: August Road Drain upstream of
Crows Landing Bridge (Hogin Road)

Date: 7/31/04

Latitude 37°25.875' Longitude 120°59.625'
 37.4311 120.9937

Weather: Sunny / WARM / clear

Personnel: SC/MM elevation: 406 accuracy: 27.2

Flow: less than 1A/sec

Estd. Midchannel Depth: 2 feet

Stage: NA

Field Meter Data

<u>Temp, °C</u>	<u>EC, µS/cm</u>	<u>DO, mg/L</u>	<u>pH</u>
30.5	2200 2082	12.6	8.48

Samples Collected

<u>Sample ID</u>	<u>Time</u>	<u>Sample Depth</u>	<u>Notes*</u>
<input checked="" type="checkbox"/> 01-ARDCL-007	1605	2 feet	BG
<input checked="" type="checkbox"/> 01-ARDCL-008	1606	2 feet	BG
<input checked="" type="checkbox"/> 01-ARDCL-009	1607	2 feet	BG
<input checked="" type="checkbox"/> 01-ARDCL-010	1608	2 feet	BG
<input checked="" type="checkbox"/> 01-ARDCL-011	1609	2 feet	BG
<input checked="" type="checkbox"/> 01-ARDCL-012	1610	2 feet	BG

Additional Notes or Comments:

ON SITE 1555
 off site

D.O. recalibrated & D.O. is accurate

Site appears to be an illegal dumping area.

SG = Surface Grab, direct to container; BG = Bucket Grab

ESJRW FIELD SAMPLING DATA LOG SHEET: EVENT 01
Ag Waiver Program

Station: Merced River at Santa Fe Drive

Date: 7/31/04

N 37° 25.635' W 120° 40.403'

Latitude 37.4271

Longitude 120.6722

Weather: Sunny / warm

Personnel: Sc/mm Elev: 9071ft Acc: 309ft

Flow: AVG = 1 MPH / 1.47 ft/sec

Estd. Midchannel Depth: 2 feet

Stage: N/A

Field Meter Data

<u>Temp, °C</u>	<u>EC, µS/cm</u>	<u>DO, mg/L</u>	<u>pH</u>
<u>27.6</u>	<u>521</u>	<u>1.24 @ 7.44</u>	<u>7.49</u>

Samples Collected

<u>Sample ID</u>	<u>Time</u>	<u>Sample Depth</u>	<u>Notes*</u>
<input checked="" type="checkbox"/> 01-MRSFD-013	<u>1440</u>	<u>2 ft</u>	<u>SG</u>
<input checked="" type="checkbox"/> 01-MRSFD-014	<u>1441</u>	<u>2 ft</u>	<u>SG</u>
<input type="checkbox"/> 01-MRSFD-015	<u>1442</u>	<u>2 ft</u>	<u>SG</u>
<input checked="" type="checkbox"/> 01-MRSFD-016	<u>1443</u>	<u>2 ft</u>	<u>SG</u>
<input checked="" type="checkbox"/> 01-MRSFD-017	<u>1444</u>	<u>2 ft</u>	<u>SG</u>
<input checked="" type="checkbox"/> 01-MRSFD-018	<u>1445</u>	<u>2 ft</u>	<u>SG</u>

Additional Notes or Comments:

* SG = Surface Grab, direct to container; BG = Bucket Grab

ESJRW FIELD SAMPLING DATA LOG SHEET: EVENT 01
Ag Waiver Program

Station: Duck Slough at Gurr Road

Date: 7/31/04

N 37° 12.854' W 120° 33.640'
 Latitude 37.2077 Longitude 120.5781

Weather: Sunny, clear, warm

Personnel: NM/SC Elevation: 71.94 Accuracy: ±2.8ft Flow: 0.24 mph Avg / 0.35 ft/sec

Estd. Midchannel Depth: 1ft Stage: N/A

Field Meter Data

<u>Temp, °C</u>	<u>EC, µS/cm</u>	<u>DO, mg/L</u>	<u>pH</u>
25.5	364	7.82	7.75

Samples Collected

<u>Sample ID</u>	<u>Time</u>	<u>Sample Depth</u>	<u>Notes*</u>
<input checked="" type="checkbox"/> 01-DSAGR-MS/MSD	1150	1ft	BG
<input checked="" type="checkbox"/> 01-DSAGR-MS/MSD	1159	1ft	BG
<input checked="" type="checkbox"/> 01-DSAGR-019	1151 1157	1ft	BG
<input checked="" type="checkbox"/> 01-DSAGR-020	1152 1158	1ft	BG
<input checked="" type="checkbox"/> 01-DSAGR-021	1153 1203	NA	BG
<input checked="" type="checkbox"/> 01-DSAGR-022	1204	1ft	BG
<input checked="" type="checkbox"/> 01-DSAGR-023	1205	1ft	BG
<input checked="" type="checkbox"/> 01-DSAGR-024	1200	NA	BG
<input checked="" type="checkbox"/> 01-DSAGR-025	1201	1ft	BG
<input checked="" type="checkbox"/> 01-DSAGR-026	1202	1ft	BG
<input checked="" type="checkbox"/> 01-DSAGR-027	1206	NA	BG
<input checked="" type="checkbox"/> 01-DSAGR-028	1207	1ft	BG
<input checked="" type="checkbox"/> 01-DSAGR-029	1208	1ft	BG
<input checked="" type="checkbox"/> 01-DSAGR-030	1151	NA	BG
<input checked="" type="checkbox"/> 01-DSAGR-031	1152	1ft	BG
<input checked="" type="checkbox"/> 01-DSAGR-032	1153	1ft	BG
<input checked="" type="checkbox"/> 01-DSAGR-033	1154	NA	BG
<input checked="" type="checkbox"/> 01-DSAGR-034	1155	1ft	BG
<input checked="" type="checkbox"/> 01-DSAGR-035	1156	1ft	BG

Additional Notes or Comments:

on site 1135
 off site

* SG = Surface Grab, direct to container; BG = Bucket Grab

ESJRWC FIELD SAMPLING DATA LOG SHEET: EVENT 01
Ag Waiver Program

Station: Dutchman's Creek at Gurr Road

Date: 7/31/04

N 37° 11.703'
 Latitude 37.1944

W 120° 33.674'
 Longitude 120.5784

Weather: Sunny / CLEAR / WARM

Personnel: MM/SC
 Elevation 95.1 ft
 Accuracy ± 1.2 ft

Flow: 0 ft/sec

Estd. Midchannel Depth: 1 foot

Stage: NA

Field Meter Data

<u>Temp, °C</u>	<u>EC, µS/cm</u>	<u>DO, mg/L</u>	<u>pH</u>
23.3	362	6.85	7.77

Samples Collected

<u>Sample ID</u>	<u>Time</u>	<u>Sample Depth</u>	<u>Notes*</u>
<input checked="" type="checkbox"/> 01-DCAGR-036	1050	1 ft	BG
<input checked="" type="checkbox"/> 01-DCAGR-037	1051	1 ft	BG
<input checked="" type="checkbox"/> 01-DCAGR-038	1052	1 ft	BG
<input checked="" type="checkbox"/> 01-DCAGR-039	1053	1 ft	BG
<input checked="" type="checkbox"/> 01-DCAGR-040	1054	1 ft	BG
<input checked="" type="checkbox"/> 01-DCAGR-041	1055	1 ft	BG

Additional Notes or Comments:

O.P. SITE - 1029
 OFF SITE - 1128

Met farmer Machado - landowner on both sides of creek

* SG = Surface Grab, direct to container; BG = Bucket Grab

ESJRW FIELD SAMPLING DATA LOG SHEET: EVENT 01
Ag Waiver Program

Station: Ash Slough at 21st Avenue

Date: 7-31-04

Latitude N 37° 03.273'

Longitude 120° 24.985'
 ELEV. 146.1' Acc. 18.3'

Weather: Sunny, Clear, Warm

Personnel: MM SC

Flow: 0 ft/sec

Estd. Midchannel Depth: NA

Stage: NA

Field Meter Data

<u>Temp, °C</u>	<u>EC, µS/cm</u>	<u>DO, mg/L</u>	<u>pH</u>

Samples Collected

<u>Sample ID</u>	<u>Time</u>	<u>Sample Depth</u>	<u>Notes*</u>
<input type="checkbox"/> 01-ASATA-042			
<input type="checkbox"/> 01-ASATA-043			
<input type="checkbox"/> 01-ASATA-044			
<input type="checkbox"/> 01-ASATA-045			
<input type="checkbox"/> 01-ASATA-046			
<input type="checkbox"/> 01-ASATA-047			

Additional Notes or Comments:

Stream bed is dry. Therefore no samples could be collected.

ONSITE - 0940

OFFSITE - 0956

YSI 556 MPS probe calibrated for D.O, pH, and conductivity. Standards within parameters.
 MM

* SG = Surface Grab, direct to container; BG = Bucket Grab

ESJRWFC FIELD SAMPLING DATA LOG SHEET: EVENT 02
Ag Waiver Program

Station: August Road Drain upstream of
Crows Landing Bridge (Hogin Road)

Date: 8-31-09

Latitude N 37° 25.866' Longitude W 120° 54.691'
 37.4311 120.9937

Weather: Sunny clear

Personnel: MM

Flow: 1 m.p.h

Estd. Midchannel Depth: 1.5 ft

Stage: NA

Field Meter Data
 Elevation 257.8 ft
 Accuracy ± 29.2 ft

Temp. °C	EC, µS/cm	DO, mg/L	pH
27.11	1093	11.26	8.12

Samples Collected

Sample ID	Time	Sample Depth	Notes*
02-ARDCL-001	1705	1.5 ft	SG mm SG DTC
02-ARDCL-002	1706	1.5 ft	GD
02-ARDCL-003	1707	1.5 ft	BG
02-ARDCL-004	1708	1.5 ft	BG
02-ARDCL-005	1709	1.5 ft	BG
02-ARDCL-006	1710	1.5 ft	BG
02-ARDCL-007	1711	1.5 ft	BG

Additional Notes or Comments:

large amounts of heavy organic material, rocks + gravel, and trash made sampling the sediment extremely difficult

lost bucket half-way through water sampling, filled jerr.-can the rest of the way direct to container

* SG = Surface Grab, direct to container; BG = Bucket Grab

ESJRWC FIELD SAMPLING DATA LOG SHEET: EVENT 02
Ag Waiver Program

Station: Merced River at Santa Fe Drive
 N $37^{\circ}25.627'$ W $120^{\circ}40.387'$
 Latitude 37.4271 Longitude 120.6722
 Personnel: MM
 Estd. Midchannel Depth: 2ft
 EI - 169.4ft
 ACU - 130ft

Date: 8-31-04
 Weather: Clear, Sunny
 Flow: 2.0 mph
 Stage: NA

Field Meter Data

<u>Temp. °C</u>	<u>EC. µS/cm</u>	<u>DO, mg/L</u>	<u>pH</u>
<u>MM 26.25.92</u>	<u>48</u>	<u>9.51</u>	<u>8.07</u>

Samples Collected

<u>Sample ID</u>	<u>Time</u>	<u>Sample Depth</u>	<u>Notes*</u>
<input checked="" type="checkbox"/> 02-MRSFD-008	<u>1500</u>	<u>2ft</u>	<u>MM BG DTC</u>
<input checked="" type="checkbox"/> 02-MRSFD-009	<u>1501</u>	<u>2ft</u>	<u>ED</u>
<input checked="" type="checkbox"/> 02-MRSFD-010	<u>1502</u>	<u>2ft</u>	<u>MM BG DTC</u>
<input checked="" type="checkbox"/> 02-MRSFD-011	<u>1503</u>	<u>2ft</u>	<u>MM BG DTC</u>
<input checked="" type="checkbox"/> 02-MRSFD-012	<u>1504</u>	<u>2ft</u>	<u>MM BG DTC</u>
<input checked="" type="checkbox"/> 02-MRSFD-013	<u>1505</u>	<u>2ft</u>	<u>MM BG DTC</u>
<input checked="" type="checkbox"/> 02-MRSFD-014	<u>1506</u>	<u>2ft</u>	<u>MM BG DTC</u>

Additional Notes or Comments:

*Sed collected near
 opposite bank
 from water entry
 area. Very sandy*

* SG = Surface Grab, direct to container; BG = Bucket Grab

CETIS Test Summary

 Report Date: 03 Nov-04 4:44 PM
 Link: 08-6246-5012

Acute Fish Survival Test			Pacific EcoRisk					
Test No:	09-3018-0274	Test Type:	Survival (96h)	Duration:	4 Days 0 Hours			
Start Date:	24 Sep-04 04:30 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Pimephales promelas			
Ending Date:	28 Sep-04 04:45 PM	Dil Water:		Source:	Aquatox, CA			
Setup Date:	24 Sep-04 04:30 PM	Brine:						
Sample No:	03-1972-2556	Material:	Ambient Water	Client:	SJCRCO			
Sample Date:	23 Sep-04 03:50 PM	Code:	9549	Project:				
Receive Date:	24 Sep-04 10:02 AM	Source:	SJCRCO					
Sample Age:	25 Hours	Station:	02-CRABI-009					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method		
14-8688-2881	96h Proportion Survived	100	>100	N/A	2.50%	Mann-Whitney U		
Test Acceptability								
Analysis	Endpoint	Attribute	Statistic	Acceptable Range	Decision			
14-8688-2881	96h Proportion Survived	Control Response	1	0.9 - N/A	Passes acceptability criteria			
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2					
0	Lab Water Co	1.00000	1.00000					
100		1.00000	1.00000					

Report Date: 03 Nov-04 4:46 PM
Link: 10-7173-6476

CETIS Test Summary

Acute Fish Survival Test						Pacific EcoRisk		
Test No:	09-3018-0274	Test Type:	Survival (96h)	Duration:	4 Days 0 Hours			
Start Date:	24 Sep-04 04:30 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Pimephales promelas			
Ending Date:	28 Sep-04 04:45 PM	Dil Water:		Source:	Aquatox, CA			
Setup Date:	24 Sep-04 04:30 PM	Brine:						
Sample No:	16-4002-8904	Material:	Ambient Water	Client:	SJCRCO			
Sample Date:	23 Sep-04 04:30 PM	Code:	9549	Project:				
Receive Date:	24 Sep-04 10:02 AM	Source:	SJCRCO					
Sample Age:	24 Hours	Station:	02-DCAHF-016					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method		
05-4970-1707	96h Proportion Survived	100	>100	N/A	2.50%	Mann-Whitney U		
Test Acceptability								
Analysis	Endpoint	Attribute	Statistic	Acceptable Range	Decision			
05-4970-1707	96h Proportion Survived	Control Response	1	0.9 - N/A	Passes acceptability criteria			
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2					
0	Lab Water Co	1.00000	1.00000					
100		1.00000	1.00000					

Report Date: 03 Nov-04 4:48 PM

Link: 02-2552-6168

CETIS Test Summary

Acute Fish Survival Test						Pacific EcoRisk		
Test No:	09-3018-0274	Test Type:	Survival (96h)	Duration:	4 Days 0 Hours			
Start Date:	24 Sep-04 04:30 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Pimephales promelas			
Ending Date:	28 Sep-04 04:45 PM	Dil Water:		Source:	Aquatox, CA			
Setup Date:	24 Sep-04 04:30 PM	Brine:						
Sample No:	12-9169-1831	Material:	Ambient Water	Client:	SJCRCD			
Sample Date:	23 Sep-04 11:30 AM	Code:	9549	Project:				
Receive Date:	24 Sep-04 10:02 AM	Source:	SJCRCD					
Sample Age:	29 Hours	Station:	02-LCAJR-023					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method		
02-2529-2730	96h Proportion Survived	100	>100	N/A	2.50%	Mann-Whitney U		
Test Acceptability								
Analysis	Endpoint	Attribute	Statistic	Acceptable Range	Decision			
02-2529-2730	96h Proportion Survived	Control Response	1	0.9 - N/A	Passes acceptability criteria			
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2					
0	Lab Water Co	1.00000	1.00000					
100		1.00000	1.00000					

Report Date: 03 Nov-04 4:49 PM

Link: 13-7179-1680

CETIS Test Summary

Acute Fish Survival Test						Pacific EcoRisk		
Test No:	09-3018-0274	Test Type:	Survival (96h)	Duration:	4 Days 0 Hours			
Start Date:	24 Sep-04 04:30 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Pimephales promelas			
Ending Date:	28 Sep-04 04:45 PM	Dil Water:		Source:	Aquatox, CA			
Setup Date:	24 Sep-04 04:30 PM	Brine:						
Sample No:	06-1985-6889	Material:	Ambient Water	Client:	SJCRCD			
Sample Date:	23 Sep-04 01:40 PM	Code:	9549	Project:				
Receive Date:	24 Sep-04 10:02 AM	Source:	SJCRCD					
Sample Age:	27 Hours	Station:	02-LTCJR-030					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method		
02-4091-1809	96h Proportion Survived	100	>100	N/A	2.50%	Mann-Whitney U		
Test Acceptability								
Analysis	Endpoint	Attribute	Statistic	Acceptable Range	Decision			
02-4091-1809	96h Proportion Survived	Control Response	1	0.9 - N/A	Passes acceptability criteria			
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2					
0	Lab Water Co	1.00000	1.00000					
100		1.00000	1.00000					

CETIS Test Summary

Report Date: 03 Nov-04 4:51 PM
 Link: 04-7513-3675

Acute Fish Survival Test				Pacific EcoRisk				
Test No:	09-3018-0274	Test Type:	Survival (96h)	Duration:	4 Days 0 Hours			
Start Date:	24 Sep-04 04:30 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Pimephales promelas			
Ending Date:	28 Sep-04 04:45 PM	Dil Water:		Source:	Aquatox, CA			
Setup Date:	24 Sep-04 04:30 PM	Brine:						
Sample No:	16-1184-5872	Material:	Ambient Water	Client:	SJCRCO			
Sample Date:	23 Sep-04 09:30 AM	Code:	9549	Project:				
Receive Date:	24 Sep-04 10:02 AM	Source:	SJCRCO					
Sample Age:	31 Hours	Station:	02-PSAHT-037					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method		
11-2858-1099	96h Proportion Survived	100	>100	N/A	2.50%	Mann-Whitney U		
Test Acceptability								
Analysis	Endpoint	Attribute	Statistic	Acceptable Range	Decision			
11-2858-1099	96h Proportion Survived	Control Response	1	0.9 - N/A	Passes acceptability criteria			
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2					
0	Lab Water Co	1.00000	1.00000					
100		1.00000	1.00000					

CETIS Test Summary

Hyalella Survival and Growth Test							Pacific EcoRisk		
Test No:	02-3950-5064	Test Type:	Survival-Growth (10 day)	Duration:	10 Days 0 Hours				
Start Date:	07 Oct-04	Protocol:	EPA 600/R-99-064 (2000)	Species:	Hyalella azteca				
Ending Date:	17 Oct-04	Dil Water:	Mod-Hard Synthetic Water	Source:	Aquatic Biosystems, CO				
Setup Date:	07 Oct-04 12:00 AM	Brine:							
Sample No:	17-4581-3371	Material:	Freshwater Sediment	Client:	SJCRCDC				
Sample Date:	23 Sep-04	Code:	9549	Project:					
Receive Date:		Source:	SJCRCDC						
Sample Age:	14 Days 0 Hours	Station:	MRABR-002						
Comparison Summary									
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method			
10-5303-8772	Mean Weight	100	>100	N/A	13.44%	Equal Variance t			
03-1088-3148	Proportion Survived	100	>100	N/A	7.79%	Mann-Whitney U			
Mean Weight Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Control Sed	8	0.12039	0.10333	0.14500	0.00499	0.01411	11.72%	
100		8	0.17402	0.14800	0.22222	0.00771	0.02181	12.53%	
Proportion Survived Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Control Sed	8	0.93750	0.80000	1.00000	0.03239	0.09161	9.77%	
100		8	0.92500	0.80000	1.00000	0.03134	0.08864	9.58%	
Mean Weight Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.10625	0.14500	0.12200	0.12700	0.11750	0.13200	0.11000	0.10333
100		0.16625	0.17750	0.14800	0.22222	0.18000	0.16222	0.16600	0.17000
Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.80000	1.00000	1.00000	1.00000	0.80000	1.00000	1.00000	0.90000
100		0.80000	0.80000	1.00000	0.90000	1.00000	0.90000	1.00000	1.00000

CETIS Test Summary

Hyalella Survival and Growth Test						Pacific EcoRisk			
Test No:	02-3950-5064	Test Type:	Survival-Growth (10 day)	Duration:	10 Days 0 Hours	Species:	Hyalella azteca	Source:	Aquatic Biosystems, CO
Start Date:	07 Oct-04	Protocol:	EPA 600/R-99-064 (2000)	DII Water:	Mod-Hard Synthetic Water	Brine:			
Ending Date:	17 Oct-04								
Setup Date:	07 Oct-04 12:00 AM								
Sample No:	10-1168-1123	Material:	Freshwater Sediment	Client:	SJCRCO	Project:			
Sample Date:	23 Sep-04	Code:	9549						
Receive Date:		Source:	SJCRCO						
Sample Age:	14 Days 0 Hours	Station:	DCAHF-017						
Comparison Summary									
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method			
08-1059-0043	Mean Weight	100	>100	N/A	9.35%	Equal Variance t			
03-2773-2080	Proportion Survived	100	>100	N/A	6.44%	Mann-Whitney U			
Mean Weight Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Control Sed	8	0.12039	0.10333	0.14500	0.00499	0.01411	11.72%	
100		8	0.15408	0.13800	0.16889	0.00399	0.01129	7.33%	
Proportion Survived Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Control Sed	8	0.93750	0.80000	1.00000	0.03239	0.09161	9.77%	
100		8	0.95000	0.90000	1.00000	0.01890	0.05345	5.63%	
Mean Weight Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.10625	0.14600	0.12200	0.12700	0.11750	0.13200	0.11000	0.10333
100		0.16556	0.16889	0.14222	0.14500	0.16000	0.15800	0.15400	0.13800
Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.80000	1.00000	1.00000	1.00000	0.80000	1.00000	1.00000	0.90000
100		0.90000	0.90000	0.90000	1.00000	0.90000	1.00000	1.00000	1.00000

CETIS Test Summary

Hyalella Survival and Growth Test						Pacific EcoRisk			
Test No:	02-3950-5064	Test Type:	Survival-Growth (10 day)	Duration:	10 Days 0 Hours	Species:	Hyalella azteca	Source:	Aquatic Biosystems, CO
Start Date:	07 Oct-04	Protocol:	EPA 600/R-99-064 (2000)	Dil Water:	Mod-Hard Synthetic Water	Brine:			
Ending Date:	17 Oct-04								
Setup Date:	07 Oct-04 12:00 AM								
Sample No:	08-6348-8786	Material:	Freshwater Sediment	Client:	SJCRCD	Project:			
Sample Date:	23 Sep-04	Code:	9549						
Receive Date:		Source:	SJCRCD						
Sample Age:	14 Days 0 Hours	Station:	02-LCAJR-024						
Comparison Summary									
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method			
14-8250-8477	Mean Weight	100	>100	N/A	10.20%	Equal Variance t			
20-6346-2213	Proportion Survived	100	>100	N/A	13.79%	Equal Variance t			
Mean Weight Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Control Sed	8	0.12039	0.10333	0.14500	0.00499	0.01411	11.72%	
100		8	0.18127	0.16000	0.20143	0.00487	0.01378	7.60%	
Proportion Survived Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Control Sed	8	0.93750	0.80000	1.00000	0.03239	0.09161	9.77%	
100		8	0.81250	0.30000	1.00000	0.08332	0.23566	29.00%	
Mean Weight Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.10625	0.14500	0.12200	0.12700	0.11750	0.13200	0.11000	0.10333
100		0.16000	0.18200	0.18100	0.19500	0.17625	0.18778	0.16667	0.20143
Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.80000	1.00000	1.00000	1.00000	0.80000	1.00000	1.00000	0.90000
100		0.80000	1.00000	1.00000	1.00000	0.80000	0.90000	0.30000	0.70000

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Link: 14-2433-8111

CETIS Test Summary

Hyalella Survival and Growth Test							Pacific EcoRisk		
Test No:	02-3950-5064	Test Type:	Survival-Growth (10 day)	Duration:	10 Days 0 Hours				
Start Date:	07 Oct-04	Protocol:	EPA 600/R-99-064 (2000)	Species:	Hyalella azteca				
Ending Date:	17 Oct-04	Dil Water:	Mod-Hard Synthetic Water	Source:	Aquatic Biosystems, CO				
Setup Date:	07 Oct-04 12:00 AM	Brine:							
Sample No:	01-5483-3574	Material:	Freshwater Sediment	Client:	SJCRC				
Sample Date:	23 Sep-04	Code:	9549	Project:					
Receive Date:		Source:	SJCRC						
Sample Age:	14 Days 0 Hours	Station:	LTCJR-031						
Comparison Summary									
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method			
11-5640-2210	Mean Weight	<100	100	N/A	10.20%	Equal Variance t			
11-0170-8496	Proportion Survived	100	>100	N/A	8.43%	Equal Variance t			
Mean Weight Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Control Sed	8	0.12039	0.10333	0.14500	0.00499	0.01411	11.72%	
100		8	0.09041	0.06625	0.11100	0.00487	0.01377	15.23%	
Proportion Survived Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Control Sed	8	0.93750	0.80000	1.00000	0.03239	0.09161	9.77%	
100		8	0.85000	0.70000	1.00000	0.03780	0.10690	12.58%	
Mean Weight Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.10625	0.14500	0.12200	0.12700	0.11750	0.13200	0.11000	0.10333
100		0.10572	0.09125	0.09200	0.08875	0.06625	0.08500	0.11100	0.08333
Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.80000	1.00000	1.00000	1.00000	0.80000	1.00000	1.00000	0.90000
100		0.70000	0.80000	1.00000	0.80000	0.80000	0.80000	1.00000	0.90000

CETIS Test Summary

Hyalella Survival and Growth Test		Pacific EcoRisk
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Test No: 02-3950-5064	Test Type: Survival-Growth (10 day)	Duration: 10 Days 0 Hours
Start Date: 07 Oct-04	Protocol: EPA 600/R-99-064 (2000)	Species: Hyalella azteca
Ending Date: 17 Oct-04	Dil Water: Mod-Hard Synthetic Water	Source: Aquatic Biosystems, CO
Setup Date: 07 Oct-04 12:00 AM	Brine:	

Sample No: 13-4166-1458	Material: Freshwater Sediment	Client: SJCRCD
Sample Date: 23 Sep-04	Code: 9549	Project:
Receive Date:	Source: SJCRCD	
Sample Age: 14 Days 0 Hours	Station: PSAHT-038	

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
04-2754-3325	Mean Weight	100	>100	N/A	8.37%	Equal Variance t
07-5842-7112	Proportion Survived	100	>100	N/A	18.75%	Mann-Whitney U

Mean Weight Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Control Sed	8	0.12039	0.10333	0.14500	0.00499	0.01411	11.72%
100		8	0.12985	0.11833	0.14100	0.00279	0.00790	6.09%

Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Control Sed	8	0.93750	0.80000	1.00000	0.03239	0.09161	9.77%
100		8	0.78750	0.10000	1.00000	0.11090	0.31368	39.83%

Mean Weight Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.10625	0.14500	0.12200	0.12700	0.11750	0.13200	0.11000	0.10333
100		0.12750	0.12000	0.14100	0.13100	0.13600	0.12900	0.11833	0.13600

Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.80000	1.00000	1.00000	1.00000	0.80000	1.00000	1.00000	0.90000
100		0.80000	0.80000	1.00000	0.10000	1.00000	1.00000	0.60000	1.00000

CETIS Test Summary

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 Link: 06-7645-3295

Hyalella Survival and Growth Test Pacific EcoRisk

Test No: 02-3950-5064	Test Type: Survival-Growth (10 day)	Duration: 10 Days 0 Hours
Start Date: 07 Oct-04	Protocol: EPA 600/R-99-064 (2000)	Species: Hyalella azteca
Ending Date: 17 Oct-04	Dil Water: Mod-Hard Synthetic Water	Source: Aquatic Biosystems, CO
Setup Date: 07 Oct-04 12:00 AM	Brine:	

Sample No: 17-4581-3371	Material: Freshwater Sediment	Client: S.JCRCD
Sample Date: 23 Sep-04	Code: 9549	Project:
Receive Date:	Source: S.JCRCD	
Sample Age: 14 Days 0 Hours	Station: MRABR-002	

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
10-5303-8772	Mean Weight	100	>100	N/A	13.44%	Equal Variance t
03-1088-3148	Proportion Survived	100	>100	N/A	7.79%	Mann-Whitney U

Mean Weight Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Control Sed	8	0.12039	0.10333	0.14500	0.00499	0.01411	11.72%
100		8	0.17402	0.14800	0.22222	0.00771	0.02181	12.63%

Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Control Sed	8	0.93750	0.80000	1.00000	0.03239	0.09161	9.77%
100		8	0.92500	0.80000	1.00000	0.03134	0.08864	9.58%

Mean Weight Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.10625	0.14500	0.12200	0.12700	0.11750	0.13200	0.11000	0.10333
100		0.16625	0.17750	0.14800	0.22222	0.18000	0.16222	0.16600	0.17000

Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.80000	1.00000	1.00000	1.00000	0.80000	1.00000	1.00000	0.90000
100		0.80000	0.80000	1.00000	0.90000	1.00000	0.90000	1.00000	1.00000

Report Date: 04 Nov-04 10:09 AM

Link: 07-2562-6550

CETIS Test Summary

Hyalella Survival and Growth Test						Pacific EcoRisk			
Test No:	02-3950-5064	Test Type:	Survival-Growth (10 day)	Duration:	10 Days 0 Hours	Species:	Hyalella azteca	Source:	Aquatic Biosystems, CO
Start Date:	07 Oct-04	Protocol:	EPA 600/R-99-064 (2000)	Dil Water:	Mod-Hard Synthetic Water	Brine:			
Ending Date:	17 Oct-04								
Setup Date:	07 Oct-04 12:00 AM								
Sample No:	08-1461-9078	Material:	Freshwater Sediment	Client:	SJCRCD	Project:			
Sample Date:	23 Sep-04	Code:	9549						
Receive Date:		Source:	SJCRCD						
Sample Age:	14 Days 0 Hours	Station:	MRABR-003						
Comparison Summary									
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method			
16-1950-4287	Mean Weight	100	>100	N/A	19.22%	Equal Variance t			
06-0790-9579	Proportion Survived	100	>100	N/A	9.47%	Mann-Whitney U			
Mean Weight Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Control Sed	8	0.12039	0.10333	0.14500	0.00499	0.01411	11.72%	
100		8	0.16849	0.11750	0.20889	0.01215	0.03436	20.39%	
Proportion Survived Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Control Sed	8	0.93750	0.80000	1.00000	0.03239	0.09161	9.77%	
100		8	0.85000	0.50000	1.00000	0.05345	0.15119	17.79%	
Mean Weight Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.10625	0.14500	0.12200	0.12700	0.11750	0.13200	0.11000	0.10333
100		0.13000	0.11750	0.18600	0.18556	0.18333	0.20889	0.13889	0.19778
Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.80000	1.00000	1.00000	1.00000	0.80000	1.00000	1.00000	0.90000
100		0.50000	0.80000	1.00000	0.90000	0.90000	0.90000	0.90000	0.90000

Table 10. Physical parameters for Event #1 (August 24, 2004). PQL = Practical Quantitation Limit, DIL = dilution, DLR = PQR x Dilution.

SampleNumber	SiteCode	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	DLR	PQL	DIL	Flag	SubmissionNumber
487838	01-CRABI-021	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Color (A.P.H.A)	30	units	SM 2120 B	1	1	1		2004081857
488204	01-DCAHF-027	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Color (A.P.H.A)	100	units	SM 2120 B	20	1	20		2004081857
488215	01-LCAJR-033	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Color (A.P.H.A)	200	units	SM 2120 B	10	1	10		2004081857
488215	01-LTCJR-039	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Color (A.P.H.A)	50	units	SM 2120 B	10	1	10		2004081857
488215	01-MRABR-009	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Color (A.P.H.A)	ND	units	SM 2120 B	1	1	1		2004081857
488215	01-MRABR-010	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Color (A.P.H.A)	15	units	SM 2120 B	1	1	1		2004081857
487839	01-MRABR-011	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Color (A.P.H.A)	15	units	SM 2120 B	1	1	1		2004081857
488205	01-PSAHT-045	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Color (A.P.H.A)	25	units	SM 2120 B	1	1	1		2004081857
488217	01-CRABI-021	08/24/2004	Liquid	E	78415	08/25/2004	08/25/2004	pH	8.4	Std.Unit	SM 4500-H+ B	N/A	-	1		2004081857
488217	01-DCAHF-027	08/24/2004	Liquid	E	78415	08/25/2004	08/25/2004	pH	8.8	Std.Unit	SM 4500-H+ B	N/A	-	1		2004081857
487841	01-LCAJR-033	08/24/2004	Liquid	E	78415	08/25/2004	08/25/2004	pH	7.9	Std.Unit	SM 4500-H+ B	N/A	-	1		2004081857
488207	01-LTCJR-039	08/24/2004	Liquid	E	78415	08/25/2004	08/25/2004	pH	7.7	Std.Unit	SM 4500-H+ B	N/A	-	1		2004081857
488218	01-MRABR-009	08/24/2004	Liquid	E	78414	08/25/2004	08/25/2004	pH	5.5	Std.Unit	SM 4500-H+ B	N/A	-	1		2004081857
488218	01-MRABR-010	08/24/2004	Liquid	E	78414	08/25/2004	08/25/2004	pH	7.4	Std.Unit	SM 4500-H+ B	N/A	-	1		2004081857
488218	01-MRABR-011	08/24/2004	Liquid	E	78415	08/25/2004	08/25/2004	pH	7.5	Std.Unit	SM 4500-H+ B	N/A	-	1		2004081857
488218	01-PSAHT-045	08/24/2004	Liquid	E	78415	08/25/2004	08/25/2004	pH	8.0	Std.Unit	SM 4500-H+ B	N/A	-	1		2004081857
487835	01-CRABI-021	08/24/2004	Liquid	E	78667	08/30/2004	09/02/2004	Total Dissolved Solids (TDS)	130	mg/L	SM 2540 C	5	5	1		2004081857
487836	01-DCAHF-027	08/24/2004	Liquid	E	78667	08/30/2004	09/02/2004	Total Dissolved Solids (TDS)	140	mg/L	SM 2540 C	5	5	1		2004081857
487837	01-LCAJR-033	08/24/2004	Liquid	E	78667	08/30/2004	09/02/2004	Total Dissolved Solids (TDS)	70	mg/L	SM 2540 C	5	5	1		2004081857
488201	01-LTCJR-039	08/24/2004	Liquid	E	78667	08/30/2004	09/02/2004	Total Dissolved Solids (TDS)	71	mg/L	SM 2540 C	5	5	1		2004081857
488202	01-MRABR-009	08/24/2004	Liquid	E	78540	08/27/2004	08/31/2004	Total Dissolved Solids (TDS)	ND	mg/L	SM 2540 C	5	5	1		2004081857
488203	01-MRABR-010	08/24/2004	Liquid	E	78667	08/30/2004	09/02/2004	Total Dissolved Solids (TDS)	37	mg/L	SM 2540 C	5	5	1		2004081857
488212	01-MRABR-011	08/24/2004	Liquid	E	78667	08/30/2004	09/02/2004	Total Dissolved Solids (TDS)	38	mg/L	SM 2540 C	5	5	1		2004081857
488212	01-PSAHT-045	08/24/2004	Liquid	E	78667	08/30/2004	09/02/2004	Total Dissolved Solids (TDS)	120	mg/L	SM 2540 C	5	5	1		2004081857
488214	01-CRABI-021	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Turbidity	6.0	NTU	SM 2130 B	0.1	0.1	1		2004081857
488214	01-DCAHF-027	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Turbidity	110	NTU	SM 2130 B	2.0	0.1	20		2004081857
487842	01-LCAJR-033	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Turbidity	73	NTU	SM 2130 B	2.0	0.1	20		2004081857

488208	01-LTCJR-039	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Turbidity	25	NTU	SM 2130 B	0.5	0.1	5	2004081857
488219	01-MRABR-009	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Turbidity	ND	NTU	SM 2130 B	0.1	0.1	1	2004081857
488219	01-MRABR-010	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Turbidity	6.1	NTU	SM 2130 B	0.1	0.1	1	2004081857
488219	01-MRABR-011	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Turbidity	6.2	NTU	SM 2130 B	0.1	0.1	1	2004081857
488219	01-PSAHT-045	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Turbidity	7.7	NTU	SM 2130 B	0.1	0.1	1	2004081857

Table 10a. TOC for Event #1 (August 24, 2004). See Table 10 for Abbreviations.

SampleNumber	SiteCode	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	DLR	PQL	DIL	Flag	SubmissionNumber
488212	01-CRABI-020	08/24/2004	Liquid	E	78831	09/01/2004	09/01/2004	Total Organic Carbon (TOC)	5.2	mg/L	SM 5310-C	0.2	0.2	1		2004081853
488212	01-DCAHF-026	08/24/2004	Liquid	E	78862	09/02/2004	09/02/2004	Total Organic Carbon (TOC)	4.6	mg/L	SM 5310-C	0.4	0.2	2		2004081853
488213	01-LCAJR-032	08/24/2004	Liquid	E	78831	09/01/2004	09/01/2004	Total Organic Carbon (TOC)	3.5	mg/L	SM 5310-C	0.4	0.2	2		2004081853
488213	01-LTCJR-038	08/24/2004	Liquid	E	78831	09/01/2004	09/01/2004	Total Organic Carbon (TOC)	5.1	mg/L	SM 5310-C	0.4	0.2	2		2004081853
488213	01-MRABR-006	08/24/2004	Liquid	E	78831	09/01/2004	09/01/2004	Total Organic Carbon (TOC)	ND	mg/L	SM 5310-C	0.2	0.2	1		2004081853
488213	01-MRABR-007	08/24/2004	Liquid	E	78862	09/02/2004	09/02/2004	Total Organic Carbon (TOC)	1.9	mg/L	SM 5310-C	0.2	0.2	1		2004081853
488214	01-MRABR-008	08/24/2004	Liquid	E	78831	09/01/2004	09/01/2004	Total Organic Carbon (TOC)	2.6	mg/L	SM 5310-C	0.2	0.2	1		2004081853
488214	01-PSAHT-044	08/24/2004	Liquid	E	78831	09/01/2004	09/01/2004	Total Organic Carbon (TOC)	2.2	mg/L	SM 5310-C	0.2	0.2	1		2004081853

Table 11. E coli for Event #1 (August 24, 2004). See Table 9 for Abbreviations.

SampleNumber	SiteCode	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	DLR	PQL	DIL	Flag	SubmissionNumber
488216	01-CRABI-019	08/24/2004	Liquid	E	78620	08/24/2004	08/24/2004	E. coli (3x5 MTF)	50	MPN/100mLs	SM 9221-B/F	2	2	1		2004081775
488216	01-DCAHF-025	08/24/2004	Liquid	E	78620	08/24/2004	08/24/2004	E. coli (3x5 MTF)	130	MPN/100mLs	SM 9221-B/F	2	2	1		2004081775
488216	01-LCAJR-031	08/24/2004	Liquid	E	78620	08/24/2004	08/24/2004	E. coli (3x5 MTF)	130	MPN/100mLs	SM 9221-B/F	2	2	1		2004081775
488216	01-LTCJR-037	08/24/2004	Liquid	E	78620	08/24/2004	08/24/2004	E. coli (3x5 MTF)	500	MPN/100mLs	SM 9221-B/F	2	2	1		2004081775
487840	01-MRABR-003	08/24/2004	Liquid	E	78620	08/24/2004	08/24/2004	E. coli (3x5 MTF)	<2	MPN/100mLs	SM 9221-B/F	2	2	1		2004081775
488206	01-MRABR-004	08/24/2004	Liquid	E	78620	08/24/2004	08/24/2004	E. coli (3x5 MTF)	11	MPN/100mLs	SM 9221-B/F	2	2	1		2004081775
488217	01-MRABR-005	08/24/2004	Liquid	E	78620	08/24/2004	08/24/2004	E. coli (3x5 MTF)	11	MPN/100mLs	SM 9221-B/F	2	2	1		2004081775
488217	01-PSAHT-043	08/24/2004	Liquid	E	78620	08/24/2004	08/24/2004	E. coli (3x5 MTF)	4	MPN/100mLs	SM 9221-B/F	2	2	1		2004081775

Table12. Physical parameters for Event #2 (September 23, 2004). See Table 9 for Abbreviations.

SampleNumber	SiteCode	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	DLR	PQL	DIL	Flag	SubmissionNumber
500727	02-MRABR-006	09/23/2004	Liquid	E	80116	09/25/2004	09/25/2004	Color (A.P.H.A)	5.0	units	SM 2120 B	1	1	1		2004091892
500728	02-CRABI-013	09/23/2004	Liquid	E	80116	09/25/2004	09/25/2004	Color (A.P.H.A)	20	units	SM 2120 B	1	1	1		2004091892
500729	02-DCAHF-020	09/23/2004	Liquid	E	80116	09/25/2004	09/25/2004	Color (A.P.H.A)	300	units	SM 2120 B	10	1	10		2004091892
500730	02-LCAJR-027	09/23/2004	Liquid	E	80116	09/25/2004	09/25/2004	Color (A.P.H.A)	50	units	SM 2120 B	5	1	5		2004091892
500731	02-LTCJR-034	09/23/2004	Liquid	E	80116	09/25/2004	09/25/2004	Color (A.P.H.A)	50	units	SM 2120 B	5	1	5		2004091892
500732	02-PSAHT-041	09/23/2004	Liquid	E	80116	09/25/2004	09/25/2004	Color (A.P.H.A)	15	units	SM 2120 B	1	1	1		2004091892
500727	02-MRABR-006	09/23/2004	Liquid	E	80188	09/27/2004	09/27/2004	pH	7.4	Std.Unit	SM 4500-H+ B	N/A	-	1		2004091892
500728	02-CRABI-013	09/23/2004	Liquid	E	80188	09/27/2004	09/27/2004	pH	8.2	Std.Unit	SM 4500-H+ B	N/A	-	1		2004091892
500729	02-DCAHF-020	09/23/2004	Liquid	E	80188	09/27/2004	09/27/2004	pH	8.6	Std.Unit	SM 4500-H+ B	N/A	-	1		2004091892
500730	02-LCAJR-027	09/23/2004	Liquid	E	80188	09/27/2004	09/27/2004	pH	8.1	Std.Unit	SM 4500-H+ B	N/A	-	1		2004091892
500731	02-LTCJR-034	09/23/2004	Liquid	E	80188	09/27/2004	09/27/2004	pH	7.7	Std.Unit	SM 4500-H+ B	N/A	-	1		2004091892
500732	02-PSAHT-041	09/23/2004	Liquid	E	80188	09/27/2004	09/27/2004	pH	7.9	Std.Unit	SM 4500-H+ B	N/A	-	1		2004091892
500727	02-MRABR-006	09/23/2004	Liquid	E	80335	09/29/2004	10/02/2004	Total Dissolved Solids (TDS)	37	mg/L	SM 2540 C	5	5	1		2004091892
500728	02-CRABI-013	09/23/2004	Liquid	E	80335	09/29/2004	10/02/2004	Total Dissolved Solids (TDS)	130	mg/L	SM 2540 C	5	5	1		2004091892
500729	02-DCAHF-020	09/23/2004	Liquid	E	80335	09/29/2004	10/02/2004	Total Dissolved Solids (TDS)	270	mg/L	SM 2540 C	5	5	1		2004091892
500730	02-LCAJR-027	09/23/2004	Liquid	E	80335	09/29/2004	10/02/2004	Total Dissolved Solids (TDS)	350	mg/L	SM 2540 C	5	5	1		2004091892
500731	02-LTCJR-034	09/23/2004	Liquid	E	80335	09/29/2004	10/02/2004	Total Dissolved Solids (TDS)	96	mg/L	SM 2540 C	5	5	1		2004091892
500732	02-PSAHT-041	09/23/2004	Liquid	E	80335	09/29/2004	10/02/2004	Total Dissolved Solids (TDS)	110	mg/L	SM 2540 C	5	5	1		2004091892
500727	02-MRABR-006	09/23/2004	Liquid	E	80116	09/25/2004	09/25/2004	Turbidity	2.0	NTU	SM 2130 B	0.1	0.1	1		2004091892
500728	02-CRABI-013	09/23/2004	Liquid	E	80116	09/25/2004	09/25/2004	Turbidity	4.2	NTU	SM 2130 B	0.1	0.1	1		2004091892
500729	02-DCAHF-020	09/23/2004	Liquid	E	80116	09/25/2004	09/25/2004	Turbidity	100	NTU	SM 2130 B	1.0	0.1	10		2004091892
500730	02-LCAJR-027	09/23/2004	Liquid	E	80116	09/25/2004	09/25/2004	Turbidity	29	NTU	SM 2130 B	0.5	0.1	5		2004091892
500731	02-LTCJR-034	09/23/2004	Liquid	E	80116	09/25/2004	09/25/2004	Turbidity	20	NTU	SM 2130 B	0.5	0.1	5		2004091892
500732	02-PSAHT-041	09/23/2004	Liquid	E	80116	09/25/2004	09/25/2004	Turbidity	4.8	NTU	SM 2130 B	0.1	0.1	1		2004091892

Table 13. TOC for Event #2 (September 23, 2004). See Table 9 for Abbreviations.

SampleNumber	SiteCode	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	DLR	PQL	DIL	Flag	SubmissionNumber
500721	02-MRABR-005	09/23/2004	Liquid	E	81017	10/08/2004	10/08/2004	Total Organic Carbon (TOC)	1.7	mg/L	SM 5310-C	0.2	0.2	1		2004091891
500722	02-CRABI-012	09/23/2004	Liquid	E	80608	10/04/2004	10/04/2004	Total Organic Carbon (TOC)	45	mg/L	SM 5310-C	2.0	0.2	10		2004091891
500723	02-DCAHF-019	09/23/2004	Liquid	E	80608	10/04/2004	10/04/2004	Total Organic Carbon (TOC)	6.9	mg/L	SM 5310-C	0.2	0.2	1		2004091891
500724	02-LCAJR-026	09/23/2004	Liquid	E	80608	10/04/2004	10/04/2004	Total Organic Carbon (TOC)	4.9	mg/L	SM 5310-C	0.2	0.2	1		2004091891
500725	02-LTCJR-033	09/23/2004	Liquid	E	80610	10/05/2004	10/05/2004	Total Organic Carbon (TOC)	1.6	mg/L	SM 5310-C	0.2	0.2	1		2004091891
500726	02-PSAHT-040	09/23/2004	Liquid	E	80610	10/05/2004	10/05/2004	Total Organic Carbon (TOC)	1.8	mg/L	SM 5310-C	0.2	0.2	1		2004091891

Table 14. E. coli for Event #2 (September 23, 2004). See Table 9 for Abbreviations.

SampleNumber	SiteCode	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	DLR	PQL	DIL	Flag	SubmissionNumber
500040	02-MRABR-004	09/23/2004	Liquid	E	80208	09/24/2004	09/24/2004	E. coli (3x5 MTF)	30	MPN/100mLs	SM 9221-B/F	2	2	1		2004091750
500041	02-CRABI-011	09/23/2004	Liquid	E	80208	09/24/2004	09/24/2004	E. coli (3x5 MTF)	30	MPN/100mLs	SM 9221-B/F	2	2	1		2004091750
500042	02-DCAHF-018	09/23/2004	Liquid	E	80208	09/24/2004	09/24/2004	E. coli (3x5 MTF)	8	MPN/100mLs	SM 9221-B/F	2	2	1		2004091750
500043	02-LCAJR-025	09/23/2004	Liquid	E	80208	09/24/2004	09/24/2004	E. coli (3x5 MTF)	26	MPN/100mLs	SM 9221-B/F	2	2	1		2004091750
500044	02-LTCJR-032	09/23/2004	Liquid	E	80208	09/24/2004	09/24/2004	E. coli (3x5 MTF)	170	MPN/100mLs	SM 9221-B/F	2	2	1		2004091750
500045	02-PSAHT-039	09/23/2004	Liquid	E	80208	09/24/2004	09/24/2004	E. coli (3x5 MTF)	2	MPN/100mLs	SM 9221-B/F	2	2	1		2004091750

Table 15. Pesticide data for Event #1 (August 24, 2004). See Table 9 for Abbreviations.

Sample Number	Site Code	Sample Date	Sample Type	Analyte	Results	Units	Method	DLR	PQL	DIL	Prep Date	Analysis Date	Submission Number
01-CRABI-023	CRABI	08/24/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 1940	45189
01-DCAHF-029	DCAHF	08/24/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 2009	45189
01-LCAJR-035	LCAJR	08/24/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 2038	45189
01-LTCJR-041	LTCJR	08/24/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/28/2004 0426	45189
01-MRABR-015	MRABR	08/24/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 1812	45189
01-MRABR-016	MRABR	08/24/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 1841	45189
01-MRABR-017	MRABR	08/24/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 1911	45189
01-PSAHT-047	PSAHT	08/24/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/28/2004 0455	45189
01-CRABI-022	CRABI	08/24/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	08/27/2004 1545	09/02/2004 0811	45189
01-DCAHF-028	DCAHF	08/24/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	08/27/2004 1545	09/02/2004 0826	45189
01-LCAJR-034	LCAJR	08/24/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	08/27/2004 1545	09/02/2004 0841	45189
01-LTCJR-040	LTCJR	08/24/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	08/27/2004 1545	09/02/2004 0856	45189
01-MRABR-014	MRABR	08/24/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	08/27/2004 1545	09/02/2004 0757	45189
01-PSAHT-046	PSAHT	08/24/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	08/27/2004 1545	09/02/2004 0910	45189
01-CRABI-023	CRABI	08/24/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 1940	45189
01-DCAHF-029	DCAHF	08/24/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 2009	45189
01-LCAJR-035	LCAJR	08/24/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 2038	45189
01-LTCJR-041	LTCJR	08/24/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/28/2004 0426	45189
01-MRABR-015	MRABR	08/24/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 1812	45189
01-MRABR-016	MRABR	08/24/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 1841	45189
01-MRABR-017	MRABR	08/24/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 1911	45189
01-PSAHT-047	PSAHT	08/24/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/28/2004 0455	45189
01-CRABI-022	CRABI	08/24/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	08/02/2004 0811	45189
01-DCAHF-028	DCAHF	08/24/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0826	45189
01-LCAJR-034	LCAJR	08/24/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0841	45189
01-LTCJR-040	LTCJR	08/24/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0856	45189

01-MRABR-014	MRABR	08/24/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0757	45189
01-PSAHT-046	PSAHT	08/24/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0910	45189
01-CRABI-022	CRABI	08/24/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0811	45189
01-DCAHF-028	DCAHF	08/24/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0826	45189
01-LCAJR-034	LCAJR	08/24/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0841	45189
01-LTCJR-040	LTCJR	08/24/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0856	45189
01-MRABR-014	MRABR	08/24/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0757	45189
01-PSAHT-046	PSAHT	08/24/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0910	45189
01-CRABI-022	CRABI	08/24/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0811	45189
01-DCAHF-028	DCAHF	08/24/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0826	45189
01-LCAJR-034	LCAJR	08/24/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0841	45189
01-LTCJR-040	LTCJR	08/24/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0856	45189
01-MRABR-014	MRABR	08/24/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0757	45189
01-PSAHT-046	PSAHT	08/24/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0910	45189
01-CRABI-022	CRABI	08/24/2004	E	Surrogate: DECA	64.6	% Recovery	EPA 8081A	25-143	25-143	1	08/27/2004 1545	09/02/2004 0811	45189
01-DCAHF-028	DCAHF	08/24/2004	E	Surrogate: DECA	71.2	% Recovery	EPA 8081A	25-143	25-143	1	08/27/2004 1545	09/02/2004 0826	45189
01-LCAJR-034	LCAJR	08/24/2004	E	Surrogate: DECA	69.3	% Recovery	EPA 8081A	25-143	25-143	1	08/27/2004 1545	09/02/2004 0841	45189
01-LTCJR-040	LTCJR	08/24/2004	E	Surrogate: DECA	62.5	% Recovery	EPA 8081A	25-143	25-143	1	08/27/2004 1545	09/02/2004 0856	45189
01-MRABR-014	MRABR	08/24/2004	E	Surrogate: DECA	71.0	% Recovery	EPA 8081A	25-143	25-143	1	08/27/2004 1545	09/02/2004 0757	45189
01-PSAHT-046	PSAHT	08/24/2004	E	Surrogate: DECA	72.0	% Recovery	EPA 8081A	25-143	25-143	1	08/27/2004 1545	09/02/2004 0910	45189
01-CRABI-022	CRABI	08/24/2004	E	Surrogate: TCmX	35.1	% Recovery	EPA 8081A	25-144	25-144	1	08/27/2004 1545	09/02/2004 0811	45189
01-DCAHF-028	DCAHF	08/24/2004	E	Surrogate: TCmX	47.0	% Recovery	EPA 8081A	25-144	25-144	1	08/27/2004 1545	09/02/2004 0826	45189
01-LCAJR-034	LCAJR	08/24/2004	E	Surrogate: TCmX	44.7	% Recovery	EPA 8081A	25-144	25-144	1	08/27/2004 1545	09/02/2004 0841	45189
01-LTCJR-040	LTCJR	08/24/2004	E	Surrogate: TCmX	37.2	% Recovery	EPA 8081A	25-144	25-144	1	08/27/2004 1545	09/02/2004 0856	45189
01-MRABR-014	MRABR	08/24/2004	E	Surrogate: TCmX	38.3	% Recovery	EPA 8081A	25-144	25-144	1	08/27/2004 1545	09/02/2004 0757	45189
01-PSAHT-046	PSAHT	08/24/2004	E	Surrogate: TCmX	41.1	% Recovery	EPA 8081A	25-144	25-144	1	08/27/2004 1545	09/02/2004 0910	45189
01-CRABI-023	CRABI	08/24/2004	E	Surrogate: Tributylphosphate	98.3	% Recovery	EPA 8141A	60-150	60-150	1	08/27/2004 1545	09/24/2004 1940	45189
01-DCAHF-029	DCAHF	08/24/2004	E	Surrogate: Tributylphosphate	92.9	% Recovery	EPA 8141A	60-150	60-150	1	08/27/2004 1545	09/24/2004 2009	45189
01-LCAJR-035	LCAJR	08/24/2004	E	Surrogate: Tributylphosphate	95.1	% Recovery	EPA 8141A	60-150	60-150	1	08/27/2004 1545	09/24/2004 2038	45189
01-LTCJR-041	LTCJR	08/24/2004	E	Surrogate: Tributylphosphate	101	% Recovery	EPA 8141A	60-150	60-150	1	08/27/2004 1545	09/28/2004 0426	45189
01-MRABR-015	MRABR	08/24/2004	E	Surrogate: Tributylphosphate	91.0	% Recovery	EPA 8141A	60-150	60-150	1	08/27/2004 1545	09/24/2004 1812	45189

01-MRABR-016	MRABR	08/24/2004	E	Surrogate:	98.7	%	EPA	60-150	60-150	1	08/27/2004	09/24/2004	45189
				Tributylphosphate		Recovery	8141A				1545	1841	
01-MRABR-017	MRABR	08/24/2004	E	Surrogate:	82.6	%	EPA	60-150	60-150	1	08/27/2004	09/24/2004	45189
				Tributylphosphate		Recovery	8141A				1545	1911	
01-PSAHT-047	PSAHT	08/24/2004	E	Surrogate:	105	%	EPA	60-150	60-150	1	08/27/2004	09/28/2004	45189
				Tributylphosphate		Recovery	8141A				1545	0455	
01-CRABI-023	CRABI	08/24/2004	E	Surrogate:	81.7	%	EPA	56-129	56-129	1	08/27/2004	09/24/2004	45189
				Triphenylphosphate		Recovery	8141A				1545	1940	
01-DCAHF-029	DCAHF	08/24/2004	E	Surrogate:	78.7	%	EPA	56-129	56-129	1	08/27/2004	09/24/2004	45189
				Triphenylphosphate		Recovery	8141A				1545	2009	
01-LCAJR-035	LCAJR	08/24/2004	E	Surrogate:	78.4	%	EPA	56-129	56-129	1	08/27/2004	09/24/2004	45189
				Triphenylphosphate		Recovery	8141A				1545	2038	
01-LTCJR-041	LTCJR	08/24/2004	E	Surrogate:	88.9	%	EPA	56-129	56-129	1	08/27/2004	09/28/2004	45189
				Triphenylphosphate		Recovery	8141A				1545	0426	
01-MRABR-015	MRABR	08/24/2004	E	Surrogate:	74.1	%	EPA	56-129	56-129	1	08/27/2004	09/24/2004	45189
				Triphenylphosphate		Recovery	8141A				1545	1812	
01-MRABR-016	MRABR	08/24/2004	E	Surrogate:	81.8	%	EPA	56-129	56-129	1	08/27/2004	09/24/2004	45189
				Triphenylphosphate		Recovery	8141A				1545	1841	
01-MRABR-017	MRABR	08/24/2004	E	Surrogate:	75.9	%	EPA	56-129	56-129	1	08/27/2004	09/24/2004	45189
				Triphenylphosphate		Recovery	8141A				1545	1911	
01-PSAHT-047	PSAHT	08/24/2004	E	Surrogate:	91.4	%	EPA	56-129	56-129	1	08/27/2004	09/28/2004	45189
				Triphenylphosphate		Recovery	8141A				1545	0455	
01-MRABR-012	MRABR	08/24/2004	FB	Cypermethrin	Not detected	ug/L	EPA	0.10	0.10	1	08/27/2004	09/02/2004	45189
							8081A				1545	0727	
01-MRABR-012	MRABR	08/24/2004	FB	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA	0.02	0.02	1	08/27/2004	09/02/2004	45189
							8081A				1545	0727	
01-MRABR-012	MRABR	08/24/2004	FB	Lambda cyhalothrin	Not detected	ug/L	EPA	0.02	0.02	1	08/27/2004	09/02/2004	45189
							8081A				1545	0727	
01-MRABR-012	MRABR	08/24/2004	FB	Permethrin	Not detected	ug/L	EPA	0.02	0.02	1	08/27/2004	09/02/2004	45189
							8081A				1545	0727	
01-MRABR-012	MRABR	08/24/2004	FB	Surrogate: DECA	65.7	%	EPA	25-143	25-143	1	08/27/2004	09/02/2004	45189
						Recovery	8081A				1545	0727	
01-MRABR-012	MRABR	08/24/2004	FB	Surrogate: TCmX	44.6	%	EPA	25-144	25-144	1	08/27/2004	09/02/2004	45189
						Recovery	8081A				1545	0727	
01-MRABR-013	MRABR	08/24/2004	FD	Cypermethrin	Not detected	ug/L	EPA	0.10	0.10	1	08/27/2004	09/02/2004	45189
							8081A				1545	0742	
01-MRABR-013	MRABR	08/24/2004	FD	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA	0.02	0.02	1	08/27/2004	09/02/2004	45189
							8081A				1545	0742	
01-MRABR-013	MRABR	08/24/2004	FD	Lambda cyhalothrin	Not detected	ug/L	EPA	0.02	0.02	1	08/27/2004	09/02/2004	45189
							8081A				1545	0742	
01-MRABR-013	MRABR	08/24/2004	FD	Permethrin	Not detected	ug/L	EPA	0.02	0.02	1	08/27/2004	09/02/2004	45189
							8081A				1545	0742	
01-MRABR-013	MRABR	08/24/2004	FD	Surrogate: DECA	64.9	%	EPA	25-143	25-143	1	08/27/2004	09/02/2004	45189
						Recovery	8081A				1545	0742	
01-MRABR-013	MRABR	08/24/2004	FD	Surrogate: TCmX	47.5	%	EPA	25-144	25-144	1	08/27/2004	09/02/2004	45189
						Recovery	8081A				1545	0742	

Table 16. Pesticide data for Event #2 (September 23, 2004). See Table 9 for Abbreviations.

Sample Number	Site Code	Sample Date	Sample Type	Analyte	Results	Units	Method	DLR	PQL	DIL	Prep Date	Analysis Date	Submission Number
02-CRABI-015	CRABI	09/23/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1135	10/07/2004 0916	45432
02-DCAHF-022	DCAHF	09/23/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1135	10/07/2004 0945	45432
02-LCAJR-029	LCAJR	09/23/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1135	10/07/2004 1014	45432
02-LTCJR-036	LTCJR	09/23/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1135	10/07/2004 1043	45432
02-MRABR-008	MRABR	09/23/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1445	10/07/2004 0846	45432
02-PSAHT-043	PSAHT	09/23/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1445	10/07/2004 1112	45432
02-CRABI-014	CRABI	09/23/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	09/29/2004 1445	10/07/2004 1502	45432
02-DCAHF-021	DCAHF	09/23/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	09/29/2004 1445	10/07/2004 1517	45432
02-LCAJR-028	LCAJR	09/23/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	09/29/2004 1445	10/07/2004 1532	45432
02-LTCJR-035	LTCJR	09/23/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	09/29/2004 1445	10/07/2004 1546	45432
02-MRABR-007	MRABR	09/23/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	09/29/2004 1445	10/07/2004 1447	45432
02-PSAHT-042	PSAHT	09/23/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	09/29/2004 1445	10/07/2004 1601	45432
02-CRABI-015	CRABI	09/23/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1135	10/07/2004 0916	45432
02-DCAHF-022	DCAHF	09/23/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1135	10/07/2004 0945	45432
02-LCAJR-029	LCAJR	09/23/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1135	10/07/2004 1014	45432
02-LTCJR-036	LTCJR	09/23/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1135	10/07/2004 1043	45432
02-MRABR-008	MRABR	09/23/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1445	10/07/2004 0846	45432
02-PSAHT-043	PSAHT	09/23/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1445	10/07/2004 1112	45432
02-PSAHT-043	PSAHT	09/23/2004	E	Dimethoate	Not detected	ug/L	EPA 8141A	0.10	0.10	1	09/29/2004 1445	10/07/2004 1112	45432
02-CRABI-014	CRABI	09/23/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1502	45432
02-DCAHF-021	DCAHF	09/23/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1517	45432
02-LCAJR-028	LCAJR	09/23/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1532	45432
02-LTCJR-035	LTCJR	09/23/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1546	45432
02-MRABR-007	MRABR	09/23/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1447	45432
02-PSAHT-042	PSAHT	09/23/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1601	45432

02-CRABI-014	CRABI	09/23/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1502	45432
02-DCAHF-021	DCAHF	09/23/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1517	45432
02-LCAJR-028	LCAJR	09/23/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1532	45432
02-LTCJR-035	LTCJR	09/23/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1546	45432
02-MRABR-007	MRABR	09/23/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1447	45432
02-PSAHT-042	PSAHT	09/23/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1601	45432
02-CRABI-014	CRABI	09/23/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1502	45432
02-DCAHF-021	DCAHF	09/23/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1517	45432
02-LCAJR-028	LCAJR	09/23/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1532	45432
02-LTCJR-035	LTCJR	09/23/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1546	45432
02-MRABR-007	MRABR	09/23/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1447	45432
02-PSAHT-042	PSAHT	09/23/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1601	45432
02-CRABI-014	CRABI	09/23/2004	E	Surrogate: DECA	69.2	%	EPA 8081A	25-143	25-143	1	09/29/2004 1445	10/07/2004 1502	45432
02-DCAHF-021	DCAHF	09/23/2004	E	Surrogate: DECA	63.7	Recovery %	EPA 8081A	25-143	25-143	1	09/29/2004 1445	10/07/2004 1517	45432
02-LCAJR-028	LCAJR	09/23/2004	E	Surrogate: DECA	69.8	Recovery %	EPA 8081A	25-143	25-143	1	09/29/2004 1445	10/07/2004 1532	45432
02-LTCJR-035	LTCJR	09/23/2004	E	Surrogate: DECA	55.4	Recovery %	EPA 8081A	25-143	25-143	1	09/29/2004 1445	10/07/2004 1546	45432
02-MRABR-007	MRABR	09/23/2004	E	Surrogate: DECA	71.2	Recovery %	EPA 8081A	25-143	25-143	1	09/29/2004 1445	10/07/2004 1447	45432
02-PSAHT-042	PSAHT	09/23/2004	E	Surrogate: DECA	64.8	Recovery %	EPA 8081A	25-143	25-143	1	09/29/2004 1445	10/07/2004 1601	45432
02-CRABI-014	CRABI	09/23/2004	E	Surrogate: TCmX	42.0	Recovery %	EPA 8081A	25-144	25-144	1	09/29/2004 1445	10/07/2004 1502	45432
02-DCAHF-021	DCAHF	09/23/2004	E	Surrogate: TCmX	61.4	Recovery %	EPA 8081A	25-144	25-144	1	09/29/2004 1445	10/07/2004 1517	45432
02-LCAJR-028	LCAJR	09/23/2004	E	Surrogate: TCmX	66.1	Recovery %	EPA 8081A	25-144	25-144	1	09/29/2004 1445	10/07/2004 1532	45432
02-LTCJR-035	LTCJR	09/23/2004	E	Surrogate: TCmX	54.0	Recovery %	EPA 8081A	25-144	25-144	1	09/29/2004 1445	10/07/2004 1546	45432
02-MRABR-007	MRABR	09/23/2004	E	Surrogate: TCmX	63.9	Recovery %	EPA 8081A	25-144	25-144	1	09/29/2004 1445	10/07/2004 1447	45432
02-PSAHT-042	PSAHT	09/23/2004	E	Surrogate: TCmX	43.9	Recovery %	EPA 8081A	25-144	25-144	1	09/29/2004 1445	10/07/2004 1601	45432
02-CRABI-015	CRABI	09/23/2004	E	Surrogate: Tributylphosphate	103	Recovery %	EPA 8141A	60-150	60-150	1	09/29/2004 1135	10/07/2004 0916	45432
02-DCAHF-022	DCAHF	09/23/2004	E	Surrogate: Tributylphosphate	99.5	Recovery %	EPA 8141A	60-150	60-150	1	09/29/2004 1135	10/07/2004 0945	45432
02-LCAJR-029	LCAJR	09/23/2004	E	Surrogate: Tributylphosphate	102	Recovery %	EPA 8141A	60-150	60-150	1	09/29/2004 1135	10/07/2004 1014	45432
02-LTCJR-036	LTCJR	09/23/2004	E	Surrogate: Tributylphosphate	93.4	Recovery %	EPA 8141A	60-150	60-150	1	09/29/2004 1135	10/07/2004 1043	45432
02-MRABR-008	MRABR	09/23/2004	E	Surrogate: Tributylphosphate	99.0	Recovery %	EPA 8141A	60-150	60-150	1	09/29/2004 1445	10/07/2004 0846	45432
02-PSAHT-043	PSAHT	09/23/2004	E	Surrogate: Tributylphosphate	103	Recovery %	EPA 8141A	60-150	60-150	1	09/29/2004 1445	10/07/2004 1112	45432
02-CRABI-015	CRABI	09/23/2004	E	Surrogate: Triphenylphosphate	103	Recovery %	EPA 8141A	56-129	56-129	1	09/29/2004 1135	10/07/2004 0916	45432

02-DCAHF-022	DCAHF	09/23/2004	E	Surrogate	107	%	EPA	56-129	56-129	1	09/29/2004	10/07/2004	45432
				Triphenylphosphate		Recovery	8141A				1135	0945	
02-LCAJR-029	LCAJR	09/23/2004	E	Surrogate	98.4	%	EPA	56-129	56-129	1	09/29/2004	10/07/2004	45432
				Triphenylphosphate		Recovery	8141A				1135	1014	
02-LTCJR-036	LTCJR	09/23/2004	E	Surrogate	92.7	%	EPA	56-129	56-129	1	09/29/2004	10/07/2004	45432
				Triphenylphosphate		Recovery	8141A				1135	1043	
02-MRABR-008	MRABR	09/23/2004	E	Surrogate	94.2	%	EPA	56-129	56-129	1	09/29/2004	10/07/2004	45432
				Triphenylphosphate		Recovery	8141A				1445	0846	
02-PSAHT-043	PSAHT	09/23/2004	E	Surrogate	102	%	EPA	56-129	56-129	1	09/29/2004	10/07/2004	45432
				Triphenylphosphate		Recovery	8141A				1445	1112	

Analytical Method SOPs

After discussions with Regional Board staff, the reporting limits for diazinon and chlordane were lowered to 0.02 µg/L.

There were no deviations from the SOPs as provided in the QAPP. These are

- Water Column Toxicity – Appendix B, Attachments 1-3
- Sediment Toxicity – Appendix B, Attachment 4
- Organophosphorus Pesticides – Appendix B, Attachment 5
- Pyrethroid Pesticides – Appendix B, Attachment 6
- Color – Appendix B, Attachment 7
- Turbidity – Appendix B, Attachment 8
- TDS – Appendix B, Attachment 9
- TOC – Appendix B, Attachment 10
- *E. coli* – SOP not provided in original or amended QAPP, SOP attached to this section

BSK Analytical Laboratories

SOP#: 0403006.2

Revision#: 1

Date: 04/01/05

E. coli by Multiple Tube Fermentation SM 9221F

1. Scope and Application
 - 1.1 Analytes: E. coli
 - 1.2 Detection Limit: 1.1 E. coli organism per 100 mL sample for a ten tube (1X10) test and 2 organisms per 100 mL for a 15 tube (3X5) test.
 - 1.3 Applicable Matrices: The E. coli MTF technique is applicable for the examination of E. coli in drinking water, waste water, and a variety of natural waters.
 - 1.4 Dynamics Range: <1.1 to >23.0 for the 1X10 test, and <2 to >1600 for the 3X5 test.
 - 1.5 Approximate Analytical Time : 3 days
2. Summary of Method
 - 2.1 A measured volume of water is dispensed into multiple tubes of Lauryl Tryptose Broth and incubated at 35C for 24-48 hours. Tubes showing fermentation is confirmed for presence of E. coli by transfer to EC-MUG media and incubated at 44.5 °C. E.coli possess the enzyme B-glucoronidase and are capable of cleaving the substrate MUG to release the fluoregen.
3. Comments
 - 3.1 Interference: Some glass test tubes have are naturally fluorecent under UV light. Transfer cultures in such tubes to another tube before determining results.
 - 3.2 Helpful Hints:
4. Safety Issues: Some E. coli are pathogens. Handle positive tubes using aseptic technique. Media with growth regardless whether E. coli positive or negative must be autoclaved before handing over to glassware washing.
5. Sample Collection, Preservation, Containers, and Holding Times
 - 5.1 Containers: Pre-sterilized plastic 120mL bottles with sodium thiosulfate.
 - 5.2 Storage: Refrigerate at 4⁰C
 - 5.3 Hold time: 30 hours for potable water and 6 hours for waste water.
6. Apparatus
 - 6.1 20 X 150 mm test tubes
 - 6.2 10 ml pipets
 - 6.3 1 ml pipets
 - 6.4 3mm inoculating loops
 - 6.5 ¼ dram vials (or 9x30mm)

- 6.6 Water bath at 44.5 +/- 0.2 °C
- 6.7 UV lamp (6W)
- 7. Reagents and Standards
 - 7.1 Lauryl Tryptose Broth (LTB)
 - 7.2 EC-MUG Media
- 8. Procedure
 - 8.1 Media:

Prepare LTB and EC-MUG media according to manufacturer's instructions on the label. Dispense 10 mL LTB into test tubes containing an inverted vial. Dispense 10 mL EC-MUG into test tubes without inverted vials.
 - 8.2 Presumptive Phase:
 - 8.2.1 For potable water (1X10): Arrange 10 tubes of double strength LTB in a row. Pipet 10 mL of samples into each tube.
 - 8.2.1 Waste water (3X5): Arrange 5 tubes of double strength LTB in the 1st row, 5 tubes of single strength LTB in the 2nd row, and another 5 tubes of single strength LTB in a 3rd row. Pipet 10 mL sample aliquots into the 1st row, 1 mL aliquots into the 2nd row, and 0.1 mL aliquots into the 3rd row.
 - 8.2.2 Incubate tubes at 35 +/- 0.5⁰C for 24+/- 2 hours. Examine tubes for a positive presumptive reaction which is presence of turbidity *and* gas formation in the inverted vials. Re-incubate tubes with a negative reaction for another 24+/-2 hours at 35°C.
 - 8.3 Confirmed Phase:

Gently shake or rotate tubes showing positive presumptive reaction and transfer a loopful to a EC-MUG Media tube. Incubate EC-MUG Media tubes at 44+/-0.2°C for 24+/-2 hours. Examine all tubes exhibiting growth for fluorescence using a long-wavelength UV lamp. Growth and presence of bright blue fluorescence constitutes a positive reaction. Compute and record E. coli MPN densities by using the MPN Index.
- 9. QA/QC Requirements
 - 9.1 QC Samples:
 - 9.1.1 Positive Control: For every day that EC-MUG media is used, inoculate one tube with a loopful of E. coli culture. Incubate at 44.5 +/- 0.2°C for 24 +/-2 hours. Tubes should show a positive E. coli reaction.
 - 9.1.2 Negative Control: For every day that EC-MUG media is used, inoculate one tube with a loopful of K. pneumoniae culture. Incubate at 44.5 +/- 0.2°C for 24 +/-2 hours. Tubes should show a negative E. coli reaction.
 - 9.1.3 For each batch of LTB media, inoculate one tube with E. aerogenes for positive control, one tube with P. aeruginosa for negative control. Incubate tubes at 35+/-0.5 °C for 48+/-3 hours.

- 9.1.4 Media sterility control: Incubate a tube of media from each batch at 35 +/- 0.5°C for 48 +/- 3 hours. Tubes should be clear.
 - 9.2 Acceptance criteria: Incubation time and temperature as specified in section 8.2 and 8.3, and QC sample reactions as specified in section 9.1.
 - 9.3 Corrective Action required :
10. Calculations: Calculate E. coli density according to the MPN tables.

MPN INDEX
Ten 10 ml Portions

No. of Positive tubes	MPN per 100ml
0	<1.1
1	1.1
2	2.2
3	3.6
4	5.1
5	6.9
6	9.2
7	12.0
8	16.1
9	23.0
10	>23.0

MPN INDEX
Five Tubes Per Dilution (10ml, 1.0ml, 0.1ml)

Combination of Positives	MPN per 100ml	Combination of Positives	MPN per 100ml
0-0-0	<2	4-3-0	27
0-0-1	2	4-3-1	33
0-1-0	2	4-4-0	34
0-2-0	4	5-0-0	23
1-0-0	2	5-0-1	30
1-0-1	4	5-0-2	40
1-1-0	4	5-1-0	30
1-1-1	6	5-1-1	50
1-2-0	6	5-1-2	60
2-0-0	4	5-2-0	50
2-0-1	7	5-2-1	70
2-1-0	7	5-2-2	90
2-1-1	9	5-3-0	80
2-2-0	9	5-3-1	110
2-3-0	12	5-3-2	140
3-0-0	8	5-3-3	170
3-0-1	11	5-4-0	130
3-1-0	11	5-4-1	170
3-1-1	14	5-4-2	220
3-2-0	14	5-4-3	280
3-2-1	17	5-4-4	350
4-0-0	13	5-5-0	240
4-0-1	17	5-5-1	300
4-1-0	17	5-5-2	500
4-1-1	21	5-5-3	900
4-1-2	26	5-5-4	1600
4-2-0	22	5-5-5	>1600
4-2-1	26		

11. Reporting

- 11.1 Reporting Units: MPN per 100 mL
- 11.2 Reporting Limits: 1.1 for a ten tube (1X10) test, and 2 for a 15 tube (3X5) test.
- 11.3 Values Below Detection Limit: report as "less than" detection limit.

12. References

- 12.1 Method Source: Standard Methods 19th Edition Section 9221F
- 12.2 Deviation From source method and rationale

13. Signatures

Laboratory Director _____

Section Manager _____

QC Supervisor _____

Laboratory Data Sheets

Laboratory QC Samples

Table 17. Quality Control results for physical parameters for Event #1 (August 24, 2004).

SampleNumber	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	DLR	PQL	DIL
488402	08/26/2004	LCS	QC	78415	08/25/2004	08/25/2004	Alkalinity (as CaCO3)	110	mg/L	SM 2320 B	1	1	1
491411	08/26/2004	LCSD	QC	78415	08/25/2004	08/25/2004	Alkalinity (as CaCO3)	110	mg/L	SM 2320 B	1	1	1
491559	08/26/2004	LDUP	QC	78415	08/25/2004	08/25/2004	Alkalinity (as CaCO3)	44	mg/L	SM 2320 B	1	1	1
488403	08/26/2004	RBLK	QC	78415	08/25/2004	08/25/2004	Alkalinity (as CaCO3)	ND	mg/L	SM 2320 B	1	1	1
491412	08/26/2004	LDUP	QC	78415	08/25/2004	08/25/2004	Bicarbonate (as CaCO3)	44	mg/L	SM 2320 B	1	1	1
491560	08/26/2004	RBLK	QC	78415	08/25/2004	08/25/2004	Bicarbonate (as CaCO3)	ND	mg/L	SM 2320 B	1	1	1
488171	08/26/2004	LDUP	QC	78415	08/25/2004	08/25/2004	Carbonate (as CaCO3)	ND	mg/L	SM 2320 B	1	1	1
488171	08/26/2004	RBLK	QC	78415	08/25/2004	08/25/2004	Carbonate (as CaCO3)	ND	mg/L	SM 2320 B	1	1	1
488171	08/25/2004	LDUP	QC	78391	08/25/2004	08/25/2004	Color (A.P.H.A)	ND	units	SM 2120 B	1	1	1
488404	08/25/2004	RBLK	QC	78391	08/25/2004	08/25/2004	Color (A.P.H.A)	ND	units	SM 2120 B	1	1	1
488404	08/26/2004	LDUP	QC	78415	08/25/2004	08/25/2004	Conductivity - Specific (EC)	93	µmho/cm	SM 2510 B	1	1	1
488404	08/26/2004	LDUP	QC	78414	08/25/2004	08/25/2004	Conductivity - Specific (EC)	540	µmho/cm	SM 2510 B	1	1	1
488404	08/26/2004	RBLK	QC	78415	08/25/2004	08/25/2004	Conductivity - Specific (EC)	ND	µmho/cm	SM 2510 B	1	1	1
488404	08/26/2004	RBLK	QC	78414	08/25/2004	08/25/2004	Conductivity - Specific (EC)	ND	µmho/cm	SM 2510 B	1	1	1
488404	08/26/2004	LDUP	QC	78415	08/25/2004	08/25/2004	Hydroxide (as CaCO3)	ND	mg/L	SM 2320 B	1	1	1
488408	08/26/2004	RBLK	QC	78415	08/25/2004	08/25/2004	Hydroxide (as CaCO3)	ND	mg/L	SM 2320 B	1	1	1
488408	08/25/2004	LDUP	QC	78391	08/25/2004	08/25/2004	Odor	1.0	TON	SM 2150 B	1	1	1
489225	08/25/2004	RBLK	QC	78391	08/25/2004	08/25/2004	Odor	1.0	TON	SM 2150 B	1	1	1
489226	08/26/2004	LDUP	QC	78415	08/25/2004	08/25/2004	pH	7.9	Std. Unit	SM 4500-H+ B	N/A	-	1
489898	08/26/2004	LDUP	QC	78414	08/25/2004	08/25/2004	pH	7.4	Std. Unit	SM 4500-H+ B	N/A	-	1
489899	08/27/2004	LDUP	QC	78540	08/27/2004	08/31/2004	Total Dissolved Solids (TDS)	200	mg/L	SM 2540 C	5	5	1
491413	08/27/2004	LDUP	QC	78540	08/27/2004	08/31/2004	Total Dissolved Solids (TDS)	ND	mg/L	SM 2540 C	5	5	1
491415	08/30/2004	LDUP	QC	78667	08/30/2004	09/02/2004	Total Dissolved Solids (TDS)	37	mg/L	SM 2540 C	5	5	1
491561	08/30/2004	LDUP	QC	78667	08/30/2004	09/02/2004	Total Dissolved Solids (TDS)	660	mg/L	SM 2540 C	5	5	1
491563	08/27/2004	RBLK	QC	78540	08/27/2004	08/31/2004	Total Dissolved Solids (TDS)	ND	mg/L	SM 2540 C	5	5	1
491414	08/30/2004	RBLK	QC	78667	08/30/2004	09/02/2004	Total Dissolved Solids (TDS)	ND	mg/L	SM 2540 C	5	5	1
491416	09/02/2004	LCS	QC	78831	09/01/2004	09/01/2004	Total Organic Carbon (TOC)	5.1	mg/L	SM 5310-C	0.2	0.2	
491562	09/02/2004	LCS	QC	78862	09/02/2004	09/02/2004	Total Organic Carbon (TOC)	5.2	mg/L	SM 5310-C	0.2	0.2	1

491564	09/02/2004	LCSD	QC	78831	09/01/2004	09/01/2004	Total Organic Carbon (TOC)	5.2	mg/L	SM 5310-C	0.2	0.2	1
488172	09/02/2004	LCSD	QC	78862	09/02/2004	09/02/2004	Total Organic Carbon (TOC)	5.3	mg/L	SM 5310-C	0.2	0.2	1
488172	09/02/2004	MS	QC	78831	09/01/2004	09/01/2004	Total Organic Carbon (TOC)	4.3	mg/L	SM 5310-C	0.2	0.2	1
488172	09/02/2004	MS	QC	78831	09/01/2004	09/01/2004	Total Organic Carbon (TOC)	5.6	mg/L	SM 5310-C	0.2	0.2	1
488401	09/02/2004	MS	QC	78862	09/02/2004	09/02/2004	Total Organic Carbon (TOC)	6.2	mg/L	SM 5310-C	0.2	0.2	1
488401	09/02/2004	MS	QC	78862	09/02/2004	09/02/2004	Total Organic Carbon (TOC)	13	mg/L	SM 5310-C	0.2	0.2	1
488401	09/02/2004	MSD	QC	78831	09/01/2004	09/01/2004	Total Organic Carbon (TOC)	4.4	mg/L	SM 5310-C	0.2	0.2	1
488401	09/02/2004	MSD	QC	78831	09/01/2004	09/01/2004	Total Organic Carbon (TOC)	5.6	mg/L	SM 5310-C	0.2	0.2	1
488401	09/02/2004	MSD	QC	78862	09/02/2004	09/02/2004	Total Organic Carbon (TOC)	6.2	mg/L	SM 5310-C	0.2	0.2	1
488405	09/02/2004	MSD	QC	78862	09/02/2004	09/02/2004	Total Organic Carbon (TOC)	13	mg/L	SM 5310-C	0.2	0.2	1
489227	09/02/2004	RBLK	QC	78831	09/01/2004	09/01/2004	Total Organic Carbon (TOC)	ND	mg/L	SM 5310-C	0.2	0.2	1
489900	09/02/2004	RBLK	QC	78862	09/02/2004	09/02/2004	Total Organic Carbon (TOC)	ND	mg/L	SM 5310-C	0.2	0.2	1
491410	08/25/2004	LDUP	QC	78391	08/25/2004	08/25/2004	Turbidity	ND	NTU	SM 2130 B	0.1	0.1	1
491558	08/25/2004	RBLK	QC	78391	08/25/2004	08/25/2004	Turbidity	ND	NTU	SM 2130 B	0.1	0.1	1

Table 18. Quality Control results for physical parameters for Event #2 (September 23, 2004).

SampleNumber	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	DLR	PQL	DIL
500752	09/25/2004	LDUP	QC	80116	09/25/2004	09/25/2004	Color (A.P.H.A)	5.0	units	SM 2120 B	1	1	1
500753	09/25/2004	RBLK	QC	80116	09/25/2004	09/25/2004	Color (A.P.H.A)	ND	units	SM 2120 B	1	1	1
501074	09/27/2004	RBLK	QC	80188	09/27/2004	09/27/2004	Conductivity - Specific (EC)	ND	µmho/cm	SM 2510 B	1	1	1
501077	09/27/2004	LDUP	QC	80188	09/27/2004	09/27/2004	pH	7.5	Std. Unit	SM 4500-H+ B	N/A	-	1
502140	09/29/2004	LDUP	QC	80335	09/29/2004	10/02/2004	Total Dissolved Solids (TDS)	510	mg/L	SM 2540 C	5	5	1
502141	09/29/2004	RBLK	QC	80335	09/29/2004	10/02/2004	Total Dissolved Solids (TDS)	ND	mg/L	SM 2540 C	5	5	1
504034	10/04/2004	RBLK	QC	80610	10/05/2004	10/05/2004	Total Organic Carbon (TOC)	ND	mg/L	SM 5310-C	0.2	0.2	1
504035	10/04/2004	LCS	QC	80610	10/05/2004	10/05/2004	Total Organic Carbon (TOC)	5.1	mg/L	SM 5310-C	0.2	0.2	1
504036	10/04/2004	LCSD	QC	80610	10/05/2004	10/05/2004	Total Organic Carbon (TOC)	5.1	mg/L	SM 5310-C	0.2	0.2	1
504037	10/04/2004	MS	QC	80610	10/05/2004	10/05/2004	Total Organic Carbon (TOC)	5.3	mg/L	SM 5310-C	0.2	0.2	1
504038	10/04/2004	MSD	QC	80610	10/05/2004	10/05/2004	Total Organic Carbon (TOC)	5.3	mg/L	SM 5310-C	0.2	0.2	1
504870	10/06/2004	MS	QC	80610	10/05/2004	10/05/2004	Total Organic Carbon (TOC)	5.6	mg/L	SM 5310-C	0.2	0.2	1
504871	10/06/2004	MSD	QC	80610	10/05/2004	10/05/2004	Total Organic Carbon (TOC)	5.6	mg/L	SM 5310-C	0.2	0.2	1
505426	10/07/2004	RBLK	QC	80608	10/04/2004	10/04/2004	Total Organic Carbon (TOC)	ND	mg/L	SM 5310-C	0.2	0.2	1
505427	10/07/2004	LCS	QC	80608	10/04/2004	10/04/2004	Total Organic Carbon (TOC)	5.1	mg/L	SM 5310-C	0.2	0.2	1
505428	10/07/2004	LCSD	QC	80608	10/04/2004	10/04/2004	Total Organic Carbon (TOC)	5.1	mg/L	SM 5310-C	0.2	0.2	1
505429	10/07/2004	MS	QC	80608	10/04/2004	10/04/2004	Total Organic Carbon (TOC)	6.8	mg/L	SM 5310-C	0.2	0.2	1
505430	10/07/2004	MSD	QC	80608	10/04/2004	10/04/2004	Total Organic Carbon (TOC)	6.6	mg/L	SM 5310-C	0.2	0.2	1
506539	10/11/2004	RBLK	QC	81017	10/08/2004	10/08/2004	Total Organic Carbon (TOC)	ND	mg/L	SM 5310-C	0.2	0.2	1
506540	10/11/2004	LCS	QC	81017	10/08/2004	10/08/2004	Total Organic Carbon (TOC)	5.1	mg/L	SM 5310-C	0.2	0.2	1
506541	10/11/2004	LCSD	QC	81017	10/08/2004	10/08/2004	Total Organic Carbon (TOC)	5.1	mg/L	SM 5310-C	0.2	0.2	1
506542	10/11/2004	MS	QC	81017	10/08/2004	10/08/2004	Total Organic Carbon (TOC)	5.9	mg/L	SM 5310-C	0.2	0.2	1
506543	10/11/2004	MSD	QC	81017	10/08/2004	10/08/2004	Total Organic Carbon (TOC)	5.9	mg/L	SM 5310-C	0.2	0.2	1
506544	10/11/2004	MS	QC	81017	10/08/2004	10/08/2004	Total Organic Carbon (TOC)	8.6	mg/L	SM 5310-C	0.2	0.2	1
506545	10/11/2004	MSD	QC	81017	10/08/2004	10/08/2004	Total Organic Carbon (TOC)	8.6	mg/L	SM 5310-C	0.2	0.2	1
500752	09/25/2004	LDUP	QC	80116	09/25/2004	09/25/2004	Turbidity	1.9	NTU	SM 2130 B	0.1	0.1	1
500753	09/25/2004	RBLK	QC	80116	09/25/2004	09/25/2004	Turbidity	ND	NTU	SM 2130 B	0.1	0.1	1

Table 19. Quality Control results for pesticide analyses for Event #1 (August 24, 2004).

Sample Number	Sample Date	Sample Type	Analyte	Results	Units	Method	DLR	PQL	DIL	Prep Date	Analysis Date	Submission Number	Comment
N040827A-BLK	08/24/2004	QC	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 1546	45189	
N040827A-LCS	08/24/2004	QC	Chlorpyrifos	81.6	% Recovery	EPA 8141A	61-125	61-125	1	08/27/2004 1545	09/24/2004 1615	45189	
N040827A-MS	08/24/2004	QC	Chlorpyrifos	78.6	% Recovery	EPA 8141A	61-125	61-125	1	08/27/2004 1545	09/24/2004 1714	45189	
N040827A-MSD	08/24/2004	QC	Chlorpyrifos	80.6	% Recovery	EPA 8141A	61-125	61-125	1	08/27/2004 1545	09/24/2004 1743	45189	
L040826A-BLK	08/24/2004	QC	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	08/27/2004 1545	09/02/2004 0629	45189	
L040826A-LCS	08/24/2004	QC	Cypermethrin	99.4	% Recovery	EPA 8081A	65-135	65-135	1	08/27/2004 1545	09/02/2004 0643	45189	
L040826A-MS	08/24/2004	QC	Cypermethrin	60.5	% Recovery	EPA 8081A	65-135	65-135	1	08/27/2004 1545	09/02/2004 0658	45189	% Recovery exceeds lower control limit
L040826A-MSD	08/24/2004	QC	Cypermethrin	110	% Recovery	EPA 8081A	65-135	65-135	1	08/27/2004 1545	09/02/2004 0713	45189	
N040827A-BLK	08/24/2004	QC	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 1546	45189	
N040827A-LCS	08/24/2004	QC	Diazinon	84.2	% Recovery	EPA 8141A	57-130	57-130	1	08/27/2004 1545	09/24/2004 1615	45189	
N040827A-MS	08/24/2004	QC	Diazinon	81.0	% Recovery	EPA 8141A	57-130	57-130	1	08/27/2004 1545	09/24/2004 1714	45189	
N040827A-MSD	08/24/2004	QC	Diazinon	75.0	% Recovery	EPA 8141A	57-130	57-130	1	08/27/2004 1545	09/24/2004 1743	45189	
L040826A-BLK	08/24/2004	QC	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0629	45189	
L040826A-LCS	08/24/2004	QC	Esfenvalerate/Fenvalerate	98.0	% Recovery	EPA 8081A	65-135	65-135	1	08/27/2004 1545	09/02/2004 0643	45189	
L040826A-MS	08/24/2004	QC	Esfenvalerate/Fenvalerate	60.0	% Recovery	EPA 8081A	65-135	65-135	1	08/27/2004 1545	09/02/2004 0658	45189	% Recovery exceeds lower control limit
L040826A-MSD	08/24/2004	QC	Esfenvalerate/Fenvalerate	112	% Recovery	EPA 8081A	65-135	65-135	1	08/27/2004 1545	09/02/2004 0713	45189	
L040826A-BLK	08/24/2004	QC	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0629	45189	
L040826A-LCS	08/24/2004	QC	Lambda cyhalothrin	95.5	% Recovery	EPA 8081A	65-135	65-135	1	08/27/2004 1545	09/02/2004 0643	45189	
L040826A-MS	08/24/2004	QC	Lambda cyhalothrin	57.5	% Recovery	EPA 8081A	65-135	65-135	1	08/27/2004 1545	09/02/2004 0658	45189	% Recovery exceeds lower control limit
L040826A-MSD	08/24/2004	QC	Lambda cyhalothrin	109	% Recovery	EPA 8081A	65-135	65-135	1	08/27/2004 1545	09/02/2004 0713	45189	

L040826A-BLK	08/24/2004	QC	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0629	45189	
L040826A-LCS	08/24/2004	QC	Permethrin	144	% Recovery	EPA 8081A	65-135	65-135	1	08/27/2004 1545	09/02/2004 0643	45189	% Recovery exceeds upper control limit
L040826A-MS	08/24/2004	QC	Permethrin	71.5	% Recovery	EPA 8081A	65-135	65-135	1	08/27/2004 1545	09/02/2004 0658	45189	
L040826A-MSD	08/24/2004	QC	Permethrin	167	% Recovery	EPA 8081A	65-135	65-135	1	08/27/2004 1545	09/02/2004 0713	45189	% Recovery exceeds upper control limit
L040826A-BLK	08/24/2004	QC	Surrogate: DECA	79.5	% Recovery	EPA 8081A	25-143	25-143	1	08/27/2004 1545	09/02/2004 0629	45189	
L040826A-LCS	08/24/2004	QC	Surrogate: DECA	66.0	% Recovery	EPA 8081A	25-143	25-143	1	08/27/2004 1545	09/02/2004 0643	45189	
L040826A-MS	08/24/2004	QC	Surrogate: DECA	39.7	% Recovery	EPA 8081A	25-143	25-143	1	08/27/2004 1545	09/02/2004 0658	45189	
L040826A-MSD	08/24/2004	QC	Surrogate: DECA	70.0	% Recovery	EPA 8081A	25-143	25-143	1	08/27/2004 1545	09/02/2004 0713	45189	
L040826A-BLK	08/24/2004	QC	Surrogate: TCmX	54.5	% Recovery	EPA 8081A	25-144	25-144	1	08/27/2004 1545	09/02/2004 0629	45189	
L040826A-LCS	08/24/2004	QC	Surrogate: TCmX	44.3	% Recovery	EPA 8081A	25-144	25-144	1	08/27/2004 1545	09/02/2004 0643	45189	
L040826A-MS	08/24/2004	QC	Surrogate: TCmX	214	% Recovery	EPA 8081A	25-144	25-144	1	08/27/2004 1545	09/02/2004 0658	45189	% Recovery exceeds upper control limit
L040826A-MSD	08/24/2004	QC	Surrogate: TCmX	53.3	% Recovery	EPA 8081A	25-144	25-144	1	08/27/2004 1545	09/02/2004 0713	45189	
N040827A-BLK	08/24/2004	QC	Surrogate: Tributylphosphate	125	% Recovery	EPA 8141A	60-150	60-150	1	08/27/2004 1545	09/24/2004 1546	45189	
N040827A-LCS	08/24/2004	QC	Surrogate: Tributylphosphate	98.6	% Recovery	EPA 8141A	60-150	60-150	1	08/27/2004 1545	09/24/2004 1615	45189	
N040827A-MS	08/24/2004	QC	Surrogate: Tributylphosphate	90.6	% Recovery	EPA 8141A	60-150	60-150	1	08/27/2004 1545	09/24/2004 1714	45189	
N040827A-MSD	08/24/2004	QC	Surrogate: Tributylphosphate	85.9	% Recovery	EPA 8141A	60-150	60-150	1	08/27/2004 1545	09/24/2004 1743	45189	
N040827A-BLK	08/24/2004	QC	Surrogate: Triphenylphosphate	116	% Recovery	EPA 8141A	56-129	56-129	1	08/27/2004 1545	09/24/2004 1546	45189	
N040827A-LCS	08/24/2004	QC	Surrogate: Triphenylphosphate	84.6	% Recovery	EPA 8141A	56-129	56-129	1	08/27/2004 1545	09/24/2004 1615	45189	
N040827A-MS	08/24/2004	QC	Surrogate: Triphenylphosphate	79.4	% Recovery	EPA 8141A	56-129	56-129	1	08/27/2004 1545	09/24/2004 1714	45189	
N040827A-MSD	08/24/2004	QC	Surrogate: Triphenylphosphate	75.8	% Recovery	EPA 8141A	56-129	56-129	1	08/27/2004 1545	09/24/2004 1743	45189	

Table 20. Quality Control results for pesticide analyses for Event #2 (September 23, 2004).

Sample Number	Sample Date	Sample Type	Analyte	Results	Units	Method	DLR	PQL	DIL	Prep Date	Analysis Date	Submission Number	Comment
N040929A-BLK	09/23/2004	QC	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1445	10/07/2004 0522	45432	
N040929A-LCS	09/23/2004	QC	Chlorpyrifos	109	%	EPA 8141A	61-125	61-125	1	09/29/2004 1445	10/07/2004 0649	45432	
N040929A-MS	09/23/2004	QC	Chlorpyrifos	99.4	%	EPA 8141A	61-125	61-125	1	09/29/2004 1445	10/07/2004 0748	45432	
N040929A-MSD	09/23/2004	QC	Chlorpyrifos	101	%	EPA 8141A	61-125	61-125	1	09/29/2004 1445	10/07/2004 0817	45432	
L040929A-BLK	09/23/2004	QC	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	09/29/2004 1445	10/07/2004 1319	45432	
L040929A-LCS	09/23/2004	QC	Cypermethrin	76.8	%	EPA 8081A	65-135	65-135	1	09/29/2004 1445	10/07/2004 1349	45432	
L040929A-MS	09/23/2004	QC	Cypermethrin	76.6	%	EPA 8081A	65-135	65-135	1	09/29/2004 1445	10/07/2004 1418	45432	
L040929A-MSD	09/23/2004	QC	Cypermethrin	78.2	%	EPA 8081A	65-135	65-135	1	09/29/2004 1445	10/07/2004 1433	45432	
N040929A-BLK	09/23/2004	QC	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1445	10/07/2004 0522	45432	
N040929A-LCS	09/23/2004	QC	Diazinon	113	%	EPA 8141A	57-130	57-130	1	09/29/2004 1445	10/07/2004 0649	45432	
N040929A-MS	09/23/2004	QC	Diazinon	95.0	%	EPA 8141A	57-130	57-130	1	09/29/2004 1445	10/07/2004 0748	45432	
N040929A-MSD	09/23/2004	QC	Diazinon	98.0	%	EPA 8141A	57-130	57-130	1	09/29/2004 1445	10/07/2004 0817	45432	
L040929A-BLK	09/23/2004	QC	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1319	45432	
L040929A-LCS	09/23/2004	QC	Esfenvalerate/Fenvalerate	70.8	%	EPA 8081A	65-135	65-135	1	09/29/2004 1445	10/07/2004 1349	45432	
L040929A-MS	09/23/2004	QC	Esfenvalerate/Fenvalerate	74.0	%	EPA 8081A	65-135	65-135	1	09/29/2004 1445	10/07/2004 1418	45432	
L040929A-MSD	09/23/2004	QC	Esfenvalerate/Fenvalerate	116	%	EPA 8081A	65-135	65-135	1	09/29/2004 1445	10/07/2004 1433	45432	
L040929A-BLK	09/23/2004	QC	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1319	45432	
L040929A-LCS	09/23/2004	QC	Lambda cyhalothrin	76.0	%	EPA 8081A	65-135	65-135	1	09/29/2004 1445	10/07/2004 1349	45432	
L040929A-MS	09/23/2004	QC	Lambda cyhalothrin	75.6	%	EPA 8081A	65-135	65-135	1	09/29/2004 1445	10/07/2004 1418	45432	
L040929A-MSD	09/23/2004	QC	Lambda cyhalothrin	83.2	%	EPA 8081A	65-135	65-135	1	09/29/2004 1445	10/07/2004 1433	45432	
L040929A-BLK	09/23/2004	QC	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1319	45432	
L040929A-LCS	09/23/2004	QC	Permethrin	125	%	EPA 8081A	65-135	65-135	1	09/29/2004 1445	10/07/2004 1349	45432	
L040929A-MS	09/23/2004	QC	Permethrin	113	%	EPA 8081A	65-135	65-135	1	09/29/2004 1445	10/07/2004 1418	45432	
L040929A-MSD	09/23/2004	QC	Permethrin	167	%	EPA 8081A	65-135	65-135	1	09/29/2004 1445	10/07/2004 1433	45432	% Recovery exceeds

L040929A-BLK	09/23/2004	QC	Surrogate: DECA	326	% Recovery	EPA 8081A	25-143	25-143	1	09/29/2004 1445	10/07/2004 1319	45432	upper control limit % Recovery exceeds upper control limit
L040929A-LCS	09/23/2004	QC	Surrogate: DECA	72.3	% Recovery	EPA 8081A	25-143	25-143	1	09/29/2004 1445	10/07/2004 1349	45432	
L040929A-MS	09/23/2004	QC	Surrogate: DECA	67.3	% Recovery	EPA 8081A	25-143	25-143	1	09/29/2004 1445	10/07/2004 1418	45432	
L040929A-MSD	09/23/2004	QC	Surrogate: DECA	68.7	% Recovery	EPA 8081A	25-143	25-143	1	09/29/2004 1445	10/07/2004 1433	45432	
L040929A-BLK	09/23/2004	QC	Surrogate: TCmX	1.23	% Recovery	EPA 8081A	25-144	25-144	1	09/29/2004 1445	10/07/2004 1319	45432	% Recovery exceeds lower control limit
L040929A-LCS	09/23/2004	QC	Surrogate: TCmX	56.0	% Recovery	EPA 8081A	25-144	25-144	1	09/29/2004 1445	10/07/2004 1349	45432	
L040929A-MS	09/23/2004	QC	Surrogate: TCmX	51.3	% Recovery	EPA 8081A	25-144	25-144	1	09/29/2004 1445	10/07/2004 1418	45432	
L040929A-MSD	09/23/2004	QC	Surrogate: TCmX	44.0	% Recovery	EPA 8081A	25-144	25-144	1	09/29/2004 1445	10/07/2004 1433	45432	
N040929A-BLK	09/23/2004	QC	Surrogate: Tributylphosphate	109	% Recovery	EPA 8141A	60-150	60-150	1	09/29/2004 1445	10/07/2004 0522	45432	
N040929A-LCS	09/23/2004	QC	Surrogate: Tributylphosphate	116	% Recovery	EPA 8141A	60-150	60-150	1	09/29/2004 1445	10/07/2004 0649	45432	
N040929A-MS	09/23/2004	QC	Surrogate: Tributylphosphate	99.5	% Recovery	EPA 8141A	60-150	60-150	1	09/29/2004 1445	10/07/2004 0748	45432	
N040929A-MSD	09/23/2004	QC	Surrogate: Tributylphosphate	101	% Recovery	EPA 8141A	60-150	60-150	1	09/29/2004 1445	10/07/2004 0817	45432	
N040929A-BLK	09/23/2004	QC	Surrogate: Triphenylphosphate	384	% Recovery	EPA 8141A	56-129	56-129	1	09/29/2004 1445	10/07/2004 0522	45432	% Recovery exceeds upper control limit
N040929A-LCS	09/23/2004	QC	Surrogate: Triphenylphosphate	114	% Recovery	EPA 8141A	56-129	56-129	1	09/29/2004 1445	10/07/2004 0649	45432	
N040929A-MS	09/23/2004	QC	Surrogate: Triphenylphosphate	92.2	% Recovery	EPA 8141A	56-129	56-129	1	09/29/2004 1445	10/07/2004 0748	45432	
N040929A-MSD	09/23/2004	QC	Surrogate: Triphenylphosphate	98.3	% Recovery	EPA 8141A	56-129	56-129	1	09/29/2004 1445	10/07/2004 0817	45432	

Toxicity Testing

Table 21. Results of *Selenastrum capricornutum* chronic toxicity testing for the two events.

	Site	Mean cells /mL x 10 ⁶
Event 1	Lab control	1.647
	01-MRABR-001	1.302*
	01-MRABR-002	0.835*
	01-CRABI-018	1.636
	01-DCAHF-024	1.810
	01-LCAJR-030	0.910*
	01-LTCJR-036	1.624
	01-PSAHT-042	1.968
Retest	Lab control	1.260
	01-MRABR-001	1.623
	01-LCAJR-030	1.990
Event 2	Lab control	1.347
	02-MRABR-001	1.216
	02-CRABI-009	1.726
	02-DCAHF-016	1.906
	02-LCAJR-023	2.333
	02-LTCJR-030	1.627
	02-PSAHT-037	1.805

*Statistically different from the laboratory control at $p = 0.05$.

Table 22. Results of *Ceriodaphnia dubia* acute toxicity testing for the two events.

	Site	% Survival
Event 1	Lab control	90
	01-MRABR-002	90
	01-CRABI-018	90
	01-DCAHF-024	100
	01-LCAJR-030	90
	01-LTCJR-036	100
	01-PSAHT-042	100
Event 2	Lab control	95
	02-MRABR-001	5*
	02-CRABI-009	100
	02-DCAHF-016	100
	02-LCAJR-023	100
	02-LTCJR-030	100
	02-PSAHT-037	100
Persistence sampling	Lab control	95
	02-MRABR-044	75

*Statistically different from the laboratory control at $p = 0.05$.

Table 23. Targeted TIE results for the Mokelumne River @ Bruella (MRABR) ambient water (collected September 23, 2004).

Ambient Water TIE Treatment	% Survival
Lab control	100
Centrifugation blank	55
C-8 SPE blank	100
100 µg/L PBO blank	100
100% MRSFD	90
100% MRSFD + centrifugation	10
100% MRSFD + C-8 SPE	5
100% MRSFD + PBO	25

Table 24. Results of the fathead minnow acute toxicity testing for the two events.

	Site	% Survival
Event 1	Lab control	95
	01-MRABR-002	95
	01-CRABI-018	100
	01-DCAHF-024	100
	01-LCAJR-030	100
	01-LTCJR-036	100
	01-PSAHT-042	100
Event 2	Lab control	100
	02-MRABR-001	95
	02-CRABI-009	100
	02-DCAHF-016	100
	02-LCAJR-023	100
	02-LTCJR-030	100
	02-PSAHT-037	100

Table 25. Results of Event 2 sediment toxicity testing on *Hyalella azteca* survival.

Site	% Survival
Lab control	93.8
02-MRABR-002	92.5
02-DCAHF-017	95.0
02-LCAJR-024	81.2
02-LTCJR-031	85.0
02-PSAHT-038	78.8

Table 26. Results of Event 2 sediment toxicity testing on *Hyalella azteca* growth.

Site	Overall mean growth (mg)
Lab control	0.120
02-MRABR-002	0.174
02-DCAHF-017	0.154
02-LCAJR-024	0.181
02-LTCJR-031	0.090*
02-PSAHT-038	0.130

*Statistically different from the laboratory control at $p = 0.05$.

Table 27. Event #1 intra-laboratory *S. capricornutum* toxicity testing of water field duplicate samples (quality control).

Treatment	Mean cells/mL x 10 ⁶
MRABR-001	1.302
MRABR-002	0.835
	RPD = 43.7%

Table 28. Event #1 intra-laboratory *C. dubia* toxicity testing of ambient water field duplicate samples (quality control).

Treatment	% Survival
MRABR-001	90
MRABR-002	90
	RPD = 0%

Table 29. Event #1 intra-laboratory fathead minnow toxicity testing of ambient water field duplicate samples (quality control).

Treatment	% Survival
MRABR-001	100
MRABR-002	95
	RPD = 5%

Table 30. Event #2 intra-laboratory fathead minnow toxicity testing of ambient water field duplicate samples (quality control).

Treatment	% Survival
MRABR-002	92.5
MRABR-003	85
	RPD = 8.4%

Raw Data

See Appendix I.

Data Interpretation

Data Assessment

Irrigation Season – Toxicity and Chemical Analyses

Event 1

Toxicity testing - Two sites, Mokelumne River at Bruella Road and Little Johns Creek at Jack Tone Road, exhibited significantly reduced algae growth compared to the laboratory controls. The laboratory was experiencing difficulties with their algae culture and the water was retested on September 8, 2004. Both samples showed no toxicity during the retest and it was concluded that the results from the original test were due to the algal culture problems at the laboratory.

No toxicity was observed in the *Ceriodaphnia* or fathead minnow tests with the survival in all samples equaling or exceeding the survival of the laboratory controls.

Water chemistry –Chemical analysis on water from all sites indicated no detections of pesticides in any sample. Field parameters met water quality objectives, however pH at the Duck Creek @ Highway 4 site was 8.8 (compared to 7.54 in the field) by the time the water reached the laboratory. Levels of E. coli were elevated in samples collected at Lone Tree Creek at Jack Tone Road (500 MPN/100 ml).

Event 2

Toxicity testing – No toxicity was observed at any site during algae testing. One site, Mokelumne River at Bruella Road exhibited significant toxicity to *Ceriodaphnia* and a second sample was collected to determine if the toxicity was persistent. In addition, a Toxicity Identification Evaluation (TIE) was performed to determine the cause of the toxicity. There was no toxicity observed in the follow-up sample indicating that the toxicity was not persistent. By the time the TIE was performed, a retest of the sample indicated that no toxicity was present and the results of the TIE were inconclusive. Consequently, no cause could be assigned to the toxicity seen at the site. The lack of persistence makes it difficult to interpret the results with respect to affects on organisms in the water at the site. No toxicity was observed for fathead minnows.

Results of the sediment toxicity testing indicate that survival of *H. azteca* at all sites was similar to the control, and only one sample, Lone Tree Creek at Jack Tone Road exhibited a significant difference in the growth of the organism.

Water chemistry – Chemical analysis on water from all sites indicated no detections of pesticides in any sample. Field parameters met water quality objectives; however pH at the Duck Creek @ Highway 4 site again exceeded water quality objectives at 8.6 (compared to 8.2 in the field) by the time the water reached the laboratory.

Dormant Season

Data are currently unavailable for the dormant season, but we have been informed that samples from the first and second storm events have generated significant toxicity when compared to laboratory controls. Water from four sites was found to be toxic to *Selenastrum*; Lone Tree Creek at Jack Tone Road, the agricultural drain at Grant Line Canal at Calpack Road, French Camp Slough at Airport Way and Terminous Tract at Highway 12. The number of algal cells from samples collected at all sites is provided below in Table 1. Because the two sites, the ag drain near Grant Line Canal at Calpack Road, and Terminous Tract at Highway 12, exhibited an order of magnitude decrease in algal growth, algal TIEs have been initiated for those sites. Although the other two sites were significantly different from the control, the reduction in algal growth was not sufficient to warrant algal TIEs at those sites.

In addition, water from Kellog Creek at Highway 4 exhibited significant toxicity to *Ceriodaphnia* (Table 2), and water from Lone Tree Creek at Jack Tone Road exhibited significant toxicity to fathead minnows (Table 3). Mortality for both tests was greater than 50% and TIEs are being initiated on both samples. A storm sample and a duplicate sample were collected from Potato Slough at Highway 12 (samples R1-PSAHT-016 and R1-PSAHT-017). The storm sample resulted in significant toxicity to *Ceriodaphnia* while the duplicate sample did not. We are retesting both samples to determine if the difference in survival is a function of the sample or laboratory handling. Samples were collected less than 5 minutes apart, but it is possible that a slightly different portion of the water column was collected during those two samples. If it appears that the survival differences are due to the sample itself, a TIE will be initiated and an additional sample collected. During a data QA check at the Pacific Ecorisk, Inc laboratory, an additional toxic event for Littlejohns Creek at Jack Tone Road was discovered. Water from the site collected February 16, 2005 has now been determined to be toxic to the fathead minnows.

We are collecting an additional sample from each site except for Potato Slough at Highway 12 (sample collection on 2/23/04) for new tests to determine if the toxicity is persistent. When the results of the new tests and the TIEs are available, we will provide you with those data. If the retest of the sample and duplicate from Potato Slough indicate similar results, a TIE will be initiated on the water from the sample and an additional sample will be collected from the site.

Communication reports were filed to report the exceedances.

Was Monitoring Sufficient to Characterize Water Quality

The Coalition believes that sampling conducted during the summer irrigation season was sufficient to characterize water quality in those watersheds in which samples were collected. We were unable to identify the constituent responsible for toxicity at the MRABR site. The TIE was initiated immediately after learning of the toxicity, but the cause of the toxicity disappeared from the original sample. Sampling is being expanded during the current dormant season and will continue through Phase I. The larger number of watersheds will allow us to characterize discharge over a wide variety of crops and locations in the Coalition region.

Did Data Meet Water Quality Objectives

Water Quality Objectives relevant to the Coalition are provided in Table 31. The water quality did not meet water quality objectives for four tests (Table 32).

Table 31. Relevant Water Quality Objectives for the SJCDWQ Coalition Region.

<i>Basin Plan Objectives</i>					
Analyte	Units	MDL	WQO	WQO Basis	Application
Temperature	°F	NA	narr.	<5°F increase above natural	All waters designated WARM or COLD
Dissolved Oxygen	mg/L	NA	5.0	Minimum	waters designated WARM
			7.0	Minimum	waters designated COLD
pH	-log[H ⁺]	NA	6.5-8.5	"appropriate averaging period" protective of beneficial uses	All waters
Conductivity	µmhos/cm	NA	900	NA	California secondary MCL
Color	CU	2	narr.	NA	All waters
Turbidity	NTU	0.1	narr.	NA	All waters
Total Dissolved Solids (TDS)	mg/L	6	500	NA	California secondary MCL
Total Suspended Solids (TSS)	mg/L	2	narr.	NA	All waters
<i>E. Coli</i> bacteria	MPN/100mL	2	126	5-sample geometric mean;	waters designated REC-1
			235	Single sample max	waters designated REC-1
<i>Other Objectives</i>					
Analyte	Units	MDL	WQO	WQO Basis	Application
Chlorpyrifos	µg/L	0.005	0.014	4-day average	All receiving waters (CDFG 2000)
			0.02	1-hour maximum	
Diazinon	µg/L	0.005	0.05	4-day average	All receiving waters (CDFG 2000)
			0.08	1-hour maximum	
<i>Monitored Analytes Without Objectives</i>					
Analyte	Units	MDL	WQO	WQO Basis	Application
Total Organic Carbon (TOC)	mg/L	0.3	none	NA	NA

Table 32. Exceedances of water quality objectives during 2004 irrigation sampling events.

	Sample	Water Quality Objective Exceedance
Event 1	DCAHF-027 LTCJR-037	pH* <i>E. coli</i>
Event 2	DCAHF-020 LTCJR-031	pH* <i>H. azteca</i> growth (sediment toxicity)

* Laboratory pH measurement, field pH met water quality objectives.

Where are Improvements Needed

As the Coalition increases the number of monitoring sites and increases the number of samples collected across the irrigation season, characterization of discharge from irrigated agriculture will improve. The Coalition feels improvement can be made in the communicating with the laboratories to allow the Coalition to understand when toxicity has occurred. Rapid communication will allow additional samples to be collected in a timely manner, and TIEs to be initiated if the toxicity triggers have been reached.

Detection limits for organophosphate pesticides were not low enough to detect the presence of diazinon and chlorpyrifos at levels required by the Regional Board. We informed the analytical laboratory that the detection limit needed to be lower and they complied with the request. The minimum detection limit study was submitted to the Regional Board last fall for review. The lower detection limits will be used starting with the 2005 dormant season sampling.

Additional goals for the laboratory analyses include improvements on surrogate recoveries and upper and lower recovery percentages in the matrix spike. DECA and TCMX surrogate recoveries were low at ~60% and ~50% respectively. Matrix spikes and matrix spike duplicates were generally high, but some recoveries were as low as 40%, and the RPD between surrogate matrix spikes and matrix spike duplicate samples for both surrogates and analytes occasionally exceeded 40% and in one case was almost 90% for permethrin during the first sampling event.

Types of Management Practices

Obtaining information on management practices was addressed in the most recent memo to the Regional Board and is provided below.

“A software program to compile BMPs of coalition members is in the process of being develop through a PRISM grant managed by the Coalition for Urban Rural

Environmental Stewardship. This software will be provided free to coalitions groups for use in their data management systems.

Timeline: The first draft of the software is expected to be completed by July 2005. The final software is expected to be available by September 2005 with the Coalition receiving the software shortly thereafter. Data entering from the above surveys will begin immediately with totals and data analysis completed by October 2005.”

Types of Pesticides

Obtaining information on pesticide use was addressed in the most recent memo to the Regional Board from the SJDWQC and is provided below.

“Should toxicity or exceedances be detected in monitoring performed by the Coalition or Regional Board, the Coalition will determine potential sources by examining Pesticide Use Reports and cropping of the upstream subwatershed that drains into that site.”

We have queried both counties in the Coalition region and have obtained, or will shortly obtain, pesticide use reports for the irrigation season starting July 2004, and also the dormant season from February through March 2005. We are currently working through the databases available, and will continue to work through the databases to characterize pesticide use in watersheds with water quality exceedances. We have preliminary data for Grant Line Canal @ Calpack Rd., which are presented to provide an example of what we will be able to develop for all watersheds. The data for Grant Line Canal needs to be grouped into products with the same active ingredient, and will be organized so that we can obtain pesticide use in the periods immediately preceding the sampling.

Actions taken to address water quality impacts identified

In two of the tests, the sample pH met water quality objectives in the field but failed by the time the water reached the analytical laboratory. A similar but smaller increase in sample pH was experienced by water delivered to the toxicity laboratory. The cause for the change in pH is unknown. Samples were placed on ice immediately after collection, and delivered to the laboratory. Icing the samples would presumably minimize biological and chemical activity that might affect pH. As SOPs were followed, it is unclear what improvements in sampling procedures can be made. Sediment toxicity was observed at one site, but no sediment TIEs are planned for the future. When the raw data are examined, the reduction in growth rate is consistent across replicate samples indicating that the result is not an artifact of a single anomalous replicate. If sediment toxicity persists, we will do sediment chemistry on the samples to determine if chemicals that bind to sediment are responsible for the toxicity.

In addition to modifying the testing procedures to be conducted next year, the SJCDWQC is involved in an additional effort to identify and eliminate the source of the toxicity. First, to identify the potential sources, we have requested all of the Pesticide Use Reports for all watersheds in the Coalition region. The County Agricultural Commissioners have been extremely helpful but their resources are stretched and the timetable for delivery is uncertain. We have separately requested the parcel level data from the county and those data are either available or forthcoming. Unfortunately, the PURs are compiled based on a township-range-section system, while parcel data are simply given APNs. Matching the files of parcel level data with the PURs is a very slow process. Also, the PURs contain tens of thousands of lines of information, even for small windows of time, slowing the search process further. As we work through those data, we will update the Regional Board on our progress.

Despite the fact that very little toxicity from water sampling last summer was found, the SJCDWQC initiated a series of outreach meetings in the Coalition region during the winter. The BMP workshops, located in Knightson and Lockeford, provided over 100 growers and crop advisors with updates on the monitoring results outlined above. Also presented was information on Best Management Practices to protect water quality. The goal of the meetings was to outline to growers and crop advisors the activities that the Coalition was responsible for performing as a follow up to monitoring of local waterways, such as identification of sources and promotion of management measures to correct the problem.

Communication Reports

San Joaquin County Resource Conservation District
3422 W. Hammer Lane, Suite A
Stockton, California 95219
209-472-7127 ext 125

September 24, 2004

William J. Marshall, Chief
Surface Water Runoff Division
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, #200
Sacramento, CA 95670-6114

Re: San Joaquin County & Delta Water Quality Coalition
Communication Report on Monitoring Results for August 2004

On August 24, 2004 water was collected at the SJCDWQC monitoring sites. Two sites, the Mokelumne River at Bruella Road (MRABR) and Littlejohns Creek at Jack Tone Road (LCAJR) exhibited significantly reduced algal growth during the *Selenastrum* tests. Neither of the samples was significantly different from the control for the *Ceriodaphnia* or the fathead minnow tests. The results of the *Selenastrum* test are as follows:

Laboratory Control: 1,647,250 cells/mL
MRABR: 1,301,750 cells/mL
LCAJR: 910,500 cells/mL

At the time the tests were performed, the laboratory was experiencing difficulties with their *Selenastrum* cultures. As a result, we retested the two samples using the original water collected on August 24. The retest of the water resulted in no reduced algal growth in either sample. No second sample was collected to determine persistence, as we were not sure that the original test results were correct. No algal TIE was initiated.

At this point, it is unclear if the initial test results for the algal growth at the two sites are correct or if the second results are correct. Generally, the constituents causing toxicity to algae (e.g., metals or herbicides) would not experience significant degradation in the sample container over a 5-day period, and therefore if the initial results were valid, we would have expected the retest to provide a similar reduction in growth, as did the original test. The results of the water quality analysis are not yet available but it is

doubtful that the pesticides for which we tested would have resulted in toxicity to algae. Consequently, we don't believe that those results will be of much help in interpreting the results of the tests. However, we will forward the water chemistry results for those two sites when they become available. At this point, we are assuming that the first results were positive as a result of the laboratory culture problems.

A second round of sampling was conducted on September 23, 2004 and those results should be available within the next week to 10 days.

Regards,

John B. Meek, Jr. President

Cc: Bill Croyle via email
Shakoora Azimi via email
Mike Johnson via email

San Joaquin County Resource Conservation District
3422 W. Hammer Lane, Suite A
Stockton, California 95219
209-472-7127 ext 125

February 22, 2005

William Croyle
Shakoor Azimi-Gaylon
Irrigated Lands Conditional Waiver Program
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, #200
Sacramento, CA 95670-6114

Re: San Joaquin County & Delta Water Quality Coalition
Communication Report on Monitoring Results for February 16, 2005

On February 16, 2005 water was collected at the SJCDWQC monitoring sites. Toxicity tests were completed on Monday February 21, 2005 and the results were communicated to us in full late on Tuesday February 22, 2005. Toxicity was found in water from samples collected at several sites and is being reported in this communication report.

Water from four sites was found to be toxic to *Selenastrum*; Lone Tree Creek at Jack Tone Road, the ag drain at Grant Line Canal at Calpack Road, French Camp Slough at Airport Way and Terminous Tract at Highway 12. The number of algal cells from samples collected at all sites is provided below in Table 1. Because the two sites, the ag drain near Grant Line Canal at Calpack Road, and Terminous Tract at Highway 12, exhibited an order of magnitude decrease in algal growth, algal TIEs have been initiated for those sites. Although the other two sites were significantly different from the control, the reduction in algal growth was not sufficient to warrant algal TIEs at those sites.

In addition, water from Kellog Creek at Highway 4 exhibited significant toxicity to *Ceriodaphnia* (Table 2), and water from Lone Tree Creek at Jack Tone Road exhibited significant toxicity to fathead minnows (Table 3). Mortality for both tests was greater than 50% and TIEs are being initiated on both samples. A storm sample and a duplicate sample were collected from Potato Slough at Highway 12 (samples R1-PSAHT-016 and R1-PSAHT-017). The storm sample resulted in significant toxicity to *Ceriodaphnia* while the duplicate sample did not. We are retesting both samples to determine if the difference in survival is a function of the sample or laboratory handling. Samples were collected less than 5 minutes apart, but it is possible that a slightly different portion of the water column was collected during those two samples. If it appears that the survival

differences are due to the sample itself, a TIE will be initiated and an additional sample collected.

As stated in the MRP, we are collecting an additional sample from each site except for Potato Slough at Highway 12 (sample collection on 2/23/04) for new tests to determine if the toxicity is persistent. When the results of the new tests and the TIEs are available, we will provide you with those data. If the retest of the sample and duplicate from Potato Slough indicate similar results, a TIE will be initiated on the water from the sample and an additional sample will be collected from the site.

Respectfully,

John B. Meek, Jr, Program Manager
Michael L. Johnson, Technical Program

Manager

Table 1.

Site ID	Cell Growth (cells/mL)	Toxicity (Y/N)
R1-SC-LWControl-01	1,801,000	N/A
R1-PSAHT-016	2,427,000	N
R1-PSAHT-017	2,364,000	N
R1-MRABR-023	1,537,000	N
R1-LTCJR-029	1,384,000	Y
R1-KCHWF-035	2,492,000	N
R1-TTGLR-041	2,718,000	N
R1-TTGUR-047	3,023,000	N
R1-GLCCR-053	128,750	Y
R1-MCABA-059	2,623,000	N
R1-LCAJR-065	1,730,000	N
R1-FCSAW-071	1,414,000	Y
R1-GLCAA-077	1,962,000	N
R1-TTHWT-083	333,500	Y

Table 2.

Site ID	Species	% Survival	Cell Growth (cells/mL)	Toxicity (Y/N)
R1-CD-LWControl-01	Ceriodaphnia dubia	95		N/A
R1-PSAHT-016	Ceriodaphnia dubia	30		Y
R1-PSAHT-017	Ceriodaphnia dubia	75		N
R1-MRABR-023	Ceriodaphnia dubia	100		N
R1-LTCJR-029	Ceriodaphnia dubia	90		N
R1-KCHWF-035	Ceriodaphnia dubia	0		Y
R1-TTGLR-041	Ceriodaphnia dubia	100		N
R1-TTGUR-047	Ceriodaphnia dubia	95		N
R1-GLCCR-053	Ceriodaphnia dubia	80		N
R1-MCABA-059	Ceriodaphnia dubia	90		N
R1-LCAJR-065	Ceriodaphnia dubia	95		N
R1-FCSAW-071	Ceriodaphnia dubia	100		N
R1-GLCAA-077	Ceriodaphnia dubia	95		N
R1-TTHWT-083	Ceriodaphnia dubia	95		N

Table 3.

Site ID	Species	% Survival	Cell Growth (cells/mL)	Toxicity (Y/N)
R1-PP-LWControl-01	Pimephales promelas	100		N/A
R1-PSAHT-016	Pimephales promelas	85		N
R1-PSAHT-017	Pimephales promelas	80		N
R1-MRABR-023	Pimephales promelas	95		N
R1-LTCJR-029	Pimephales promelas	0		Y
R1-KCHWF-035	Pimephales promelas	80		N
R1-TTGLR-041	Pimephales promelas	95		N
R1-TTGUR-047	Pimephales promelas	80		N
R1-GLCCR-053	Pimephales promelas	70		N
R1-MCABA-059	Pimephales promelas	80		N
R1-LCAJR-065	Pimephales promelas	70		N
R1-FCSAW-071	Pimephales promelas	75		N
R1-GLCAA-077	Pimephales promelas	95		N
R1-TTHWT-083	Pimephales promelas	85		N

San Joaquin County Resource Conservation District
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February 24, 2005

William Croyle
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Re: San Joaquin County & Delta Water Quality Coalition
Communication Report on Monitoring Results for February 16, 2005

In the communication report of February 22, 2005, we reported on toxicity from five sites within the coalition region. During a data QA check at the Pacific Ecorisk, Inc laboratory, an additional problem was discovered. We are reporting an additional toxic event for Littlejohns Creek at Jack Tone Road. Water from the site collected February 16, 2005 has now been determined to be toxic to the fathead minnows. An amended Table 1 with *Pimephales* results is provided below.

The problem arose with the software used by the laboratory to perform the statistical analyses on the data. With two replicates for the control and the sample, the assumption of normality needed to perform a parametric t-test for differences between means is violated. The software then uses a nonparametric Mann-Whitney U test, which is a test of the equivalence of the cumulative distribution functions of the two samples and uses the rank order of the results as the basis for calculating the test statistic. Because of the manner in which the test statistic is calculated, a sample size of 2 (replicates in each group) for each test group guarantees that the power of the analysis is so low that there can never be any significant differences between the two cumulative distribution functions. However, examining the data revealed that there was 0% survival in the sample and 100% survival in the control. Despite the lack of statistical significance, it is obvious that a significant difference exists between the sample and the control. Unfortunately, due to the violation of the assumptions of the parametric tests that renders them inappropriate for the analysis, and the lack of replication that compromises the power of the nonparametric test, there is no ready solution to the problem. Consequently, we have decided to ignore the statistical procedure and declare the sample to be toxic to the fathead minnows.

As stated in the MRP, we will collect an additional sample and retest the water from the site to determine persistence. We have initiated a TIE with the original sample. When the results of the new tests and the TIEs are available, we will provide you with those data.

Respectfully,

John B. Meek, Jr. Program Manager
Michael L. Johnson, Technical Program

Manager

Table 1.

Site ID	Species	% Survival	Cell Growth (cells/mL)	Toxicity (Y/N)
R1-PP-LWControl-01	<i>Pimephales promelas</i>	100		N/A
R1-PSAHT-016	<i>Pimephales promelas</i>	85		N
R1-PSAHT-017	<i>Pimephales promelas</i>	80		N
R1-MRABR-023	<i>Pimephales promelas</i>	95		N
R1-LTCJR-029	<i>Pimephales promelas</i>	0		Y
R1-KCHWF-035	<i>Pimephales promelas</i>	80		N
R1-TTGLR-041	<i>Pimephales promelas</i>	95		N
R1-TTGUR-047	<i>Pimephales promelas</i>	80		N
R1-GLCCR-053	<i>Pimephales promelas</i>	70		N
R1-MCABA-059	<i>Pimephales promelas</i>	80		N
R1-LCAJR-065	<i>Pimephales promelas</i>	70		Y
R1-FCSAW-071	<i>Pimephales promelas</i>	75		N
R1-GLCAA-077	<i>Pimephales promelas</i>	95		N
R1-TTHWT-083	<i>Pimephales promelas</i>	85		N

Transmittal letter

San Joaquin County Resource Conservation District
3422 W. Hammer Lane, Suite A
Stockton, California 95219
209-472-7127 ext 125

April 1, 2005

William Croyle
Irrigated Lands Program
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive #200
Sacramento, CA 95670-6114

Dear Bill,

During the 2004 irrigation season, sampling was conducted on two dates at six sites (each sampling date). The following waiver violations were discovered during the 2004 irrigation season.

Event 1 (August 24, 2004)

Two sites, Mokelumne River at Bruella Road and Little Johns Creek at Jack Tone Road, exhibited significantly reduced algae growth compared to the laboratory controls. The laboratory was experiencing difficulties with their algae culture and the water was retested on September 8, 2004. Both samples showed no toxicity during the retest and it was concluded that the results from the original test were due to the algal culture problems at the laboratory. No toxicity was observed in the *Ceriodaphnia* or fathead minnow tests with the survival in all samples equaling or exceeding the survival of the laboratory controls.

Chemical analysis on water from all sites indicated no detections of pesticides in any sample. Field parameters met water quality objectives, however pH at the Duck Creek @ Highway 4 site was 8.8 (compared to 7.54 in the field) by the time the water reached the laboratory. Levels of E. coli were elevated in samples collected at Lone Tree Creek at Jack Tone Road (500 MPN/100 ml).

Event 2 (September 23, 2004)

No toxicity was observed at any site during algae testing. One site, Mokelumne River at Bruella Road exhibited significant toxicity to *Ceriodaphnia* and a second sample was collected to determine if the toxicity was persistent. In addition, a Toxicity Identification Evaluation (TIE) was performed to determine the cause of the toxicity. There was no toxicity observed in the follow-up sample indicating that the toxicity was not persistent. By the time the TIE was performed, a retest of the sample indicated that no toxicity was present and the results of the TIE were inconclusive. Consequently, no cause could be assigned to the toxicity seen at the site. The lack of persistence makes it difficult to interpret the results with respect to affects on organisms in the water at the site. No toxicity was observed for fathead minnows.

Results of the sediment toxicity testing indicate that survival of *H. azteca* at all sites was similar to the control, and only one sample, Lone Tree Creek at Jack Tone Road exhibited a significant difference in the growth of the organism.

Chemical analysis on water from all sites indicated no detections of pesticides in any sample. Field parameters met water quality objectives; however pH at the Duck Creek @ Highway 4 site again exceeded water quality objectives at 8.6 (compared to 8.2 in the field) by the time the water reached the laboratory.

Several toxicity exceedances have been discovered during the dormant season storm sampling. While we have unofficial data sufficient to file a Communication Report and initiate TIEs, we have not received data from the labs.

Follow-up actions

Although listed as exceedances of water quality objectives, the elevated pH measurements in the lab relative to the field calls into question the relevance of the laboratory pH reading. One site, Mokelumne River at Bruella Road exhibited significant toxicity to *Ceriodaphnia* and a second sample was collected to determine if the toxicity was persistent. In addition, a Toxicity Identification Evaluation (TIE) was performed to determine the cause of the toxicity. There was no toxicity observed in the follow-up sample indicating that the toxicity was not persistent. By the time the TIE was performed, a retest of the sample indicated that no toxicity was present and the results of the TIE were inconclusive. Consequently, no cause could be assigned to the toxicity seen at the site. The lack of persistence makes it difficult to interpret the results with respect to effects on organisms in the water at the site.

Because the cause of the toxicity is currently unknown for the Mokelumne River site, the SJCD Coalition will take the following steps: 1) using 2004 PURs, identify and quantify the chemicals that could be potential sources of toxicity to *Ceriodaphnia*, 2) determine through testing if toxicity is present in 2005, 3) perform TIEs (if toxicity trigger is exceeded) to evaluate the potential causes of toxicity including metals, 4) increase the list of chemicals tested during water chemistry analyses to include those that could be causes of toxicity to the species, 5) obtain 2005 PURs for the watershed, and 6) use the results of the toxicity tests, TIEs (if performed), water chemistry, and PUR data on location of applications in a weight-of-evidence approach to identify cause(s) and potential source(s). If sediment toxicity persists for the Lone Tree Creek site, we will initiate sediment chemistry to determine if sediment bound pesticides could be the cause of the toxicity.

Expanded sampling for Phase I and Phase II

Following discussions with Regional Board staff, the sample sites were reexamined and an expanded set of sites were proposed for 2005. The proposed sites included core sites at which sampling would continue throughout the life of the monitoring program, and a series of rotating sites that would be sampled for two years.

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

Michael L. Johnson, Ph.D.

Date

Conclusions/Recommendations

All conclusions and recommendations are found in the text of the Annual Monitoring Report.

Appendix I. Raw Data

Raw data were not provided by the laboratory and will be delivered as soon as they arrive.

CETIS Test Summary

 Report Date: 03 Nov-04 4:44 PM
 Link: 08-6246-5012

Acute Fish Survival Test			Pacific EcoRisk					
Test No:	09-3018-0274	Test Type:	Survival (96h)	Duration:	4 Days 0 Hours			
Start Date:	24 Sep-04 04:30 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Pimephales promelas			
Ending Date:	28 Sep-04 04:45 PM	Dil Water:		Source:	Aquatox, CA			
Setup Date:	24 Sep-04 04:30 PM	Brine:						
Sample No:	03-1972-2556	Material:	Ambient Water	Client:	SJCRCO			
Sample Date:	23 Sep-04 03:50 PM	Code:	9549	Project:				
Receive Date:	24 Sep-04 10:02 AM	Source:	SJCRCO					
Sample Age:	25 Hours	Station:	02-CRABI-009					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method		
14-8688-2881	96h Proportion Survived	100	>100	N/A	2.50%	Mann-Whitney U		
Test Acceptability								
Analysis	Endpoint	Attribute	Statistic	Acceptable Range	Decision			
14-8688-2881	96h Proportion Survived	Control Response	1	0.9 - N/A	Passes acceptability criteria			
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2					
0	Lab Water Co	1.00000	1.00000					
100		1.00000	1.00000					

Report Date: 03 Nov-04 4:46 PM
 Link: 10-7173-6476

CETIS Test Summary

Acute Fish Survival Test						Pacific EcoRisk		
Test No:	09-3018-0274	Test Type:	Survival (96h)	Duration:	4 Days 0 Hours			
Start Date:	24 Sep-04 04:30 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Pimephales promelas			
Ending Date:	28 Sep-04 04:45 PM	Dil Water:		Source:	Aquatox, CA			
Setup Date:	24 Sep-04 04:30 PM	Brine:						
Sample No:	16-4002-8904	Material:	Ambient Water	Client:	SJCRCO			
Sample Date:	23 Sep-04 04:30 PM	Code:	9549	Project:				
Receive Date:	24 Sep-04 10:02 AM	Source:	SJCRCO					
Sample Age:	24 Hours	Station:	02-DCAHF-016					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method		
05-4970-1707	96h Proportion Survived	100	>100	N/A	2.50%	Mann-Whitney U		
Test Acceptability								
Analysis	Endpoint	Attribute	Statistic	Acceptable Range	Decision			
05-4970-1707	96h Proportion Survived	Control Response	1	0.9 - N/A	Passes acceptability criteria			
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2					
0	Lab Water Co	1.00000	1.00000					
100		1.00000	1.00000					

Report Date: 03 Nov-04 4:48 PM

Link: 02-2552-6168

CETIS Test Summary

Acute Fish Survival Test							Pacific EcoRisk		
Test No:	09-3018-0274	Test Type:	Survival (96h)	Duration:	4 Days 0 Hours				
Start Date:	24 Sep-04 04:30 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Pimephales promelas				
Ending Date:	28 Sep-04 04:45 PM	Dil Water:		Source:	Aquatox, CA				
Setup Date:	24 Sep-04 04:30 PM	Brine:							
Sample No:	12-9169-1831	Material:	Ambient Water	Client:	SJCRCD				
Sample Date:	23 Sep-04 11:30 AM	Code:	9549	Project:					
Receive Date:	24 Sep-04 10:02 AM	Source:	SJCRCD						
Sample Age:	29 Hours	Station:	02-LCAJR-023						
Comparison Summary									
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method			
02-2529-2730	96h Proportion Survived	100	>100	N/A	2.50%	Mann-Whitney U			
Test Acceptability									
Analysis	Endpoint	Attribute	Statistic	Acceptable Range	Decision				
02-2529-2730	96h Proportion Survived	Control Response	1	0.9 - N/A	Passes acceptability criteria				
96h Proportion Survived Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Lab Water Co	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%	
100		2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%	
96h Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2						
0	Lab Water Co	1.00000	1.00000						
100		1.00000	1.00000						

Report Date: 03 Nov-04 4:49 PM

Link: 13-7179-1680

CETIS Test Summary

Acute Fish Survival Test						Pacific EcoRisk		
Test No:	09-3018-0274	Test Type:	Survival (96h)	Duration:	4 Days 0 Hours			
Start Date:	24 Sep-04 04:30 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Pimephales promelas			
Ending Date:	28 Sep-04 04:45 PM	Dil Water:		Source:	Aquatox, CA			
Setup Date:	24 Sep-04 04:30 PM	Brine:						
Sample No:	06-1985-6889	Material:	Ambient Water	Client:	SJCRCD			
Sample Date:	23 Sep-04 01:40 PM	Code:	9549	Project:				
Receive Date:	24 Sep-04 10:02 AM	Source:	SJCRCD					
Sample Age:	27 Hours	Station:	02-LTCJR-030					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method		
02-4091-1809	96h Proportion Survived	100	>100	N/A	2.50%	Mann-Whitney U		
Test Acceptability								
Analysis	Endpoint	Attribute	Statistic	Acceptable Range	Decision			
02-4091-1809	96h Proportion Survived	Control Response	1	0.9 - N/A	Passes acceptability criteria			
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2					
0	Lab Water Co	1.00000	1.00000					
100		1.00000	1.00000					

CETIS Test Summary

Report Date: 03 Nov-04 4:51 PM
 Link: 04-7513-3675

Acute Fish Survival Test				Pacific EcoRisk				
Test No:	09-3018-0274	Test Type:	Survival (96h)	Duration:	4 Days 0 Hours			
Start Date:	24 Sep-04 04:30 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Pimephales promelas			
Ending Date:	28 Sep-04 04:45 PM	Dil Water:		Source:	Aquatox, CA			
Setup Date:	24 Sep-04 04:30 PM	Brine:						
Sample No:	16-1184-5872	Material:	Ambient Water	Client:	SJCRCO			
Sample Date:	23 Sep-04 09:30 AM	Code:	9549	Project:				
Receive Date:	24 Sep-04 10:02 AM	Source:	SJCRCO					
Sample Age:	31 Hours	Station:	02-PSAHT-037					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method		
11-2858-1099	96h Proportion Survived	100	>100	N/A	2.50%	Mann-Whitney U		
Test Acceptability								
Analysis	Endpoint	Attribute	Statistic	Acceptable Range	Decision			
11-2858-1099	96h Proportion Survived	Control Response	1	0.9 - N/A	Passes acceptability criteria			
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2					
0	Lab Water Co	1.00000	1.00000					
100		1.00000	1.00000					

CETIS Test Summary

Report Date: 04 Nov-04 10:07 AM
 Link: 06-7645-3295

Hyalella Survival and Growth Test							Pacific EcoRisk		
Test No:	02-3950-5064	Test Type:	Survival-Growth (10 day)	Duration:	10 Days 0 Hours	Species:	Hyalella azteca	Source:	Aquatic Biosystems, CO
Start Date:	07 Oct-04	Protocol:	EPA 600/R-99-064 (2000)	Dil Water:	Mod-Hard Synthetic Water	Brine:			
Ending Date:	17 Oct-04	Material:	Freshwater Sediment	Client:	SJCRCD	Project:			
Setup Date:	07 Oct-04 12:00 AM	Code:	9549	Station:	MRABR-002				
Receive Date:		Source:	SJCRCD						
Sample Age:	14 Days 0 Hours								
Comparison Summary									
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method			
10-5303-8772	Mean Weight	100	>100	N/A	13.44%	Equal Variance t			
03-1088-3148	Proportion Survived	100	>100	N/A	7.79%	Mann-Whitney U			
Mean Weight Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Control Sed	8	0.12039	0.10333	0.14500	0.00499	0.01411	11.72%	
100		8	0.17402	0.14800	0.22222	0.00771	0.02181	12.53%	
Proportion Survived Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Control Sed	8	0.93750	0.80000	1.00000	0.03239	0.09161	9.77%	
100		8	0.92500	0.80000	1.00000	0.03134	0.08864	9.58%	
Mean Weight Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.10625	0.14500	0.12200	0.12700	0.11750	0.13200	0.11000	0.10333
100		0.16625	0.17750	0.14800	0.22222	0.18000	0.16222	0.16600	0.17000
Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.80000	1.00000	1.00000	1.00000	0.80000	1.00000	1.00000	0.90000
100		0.80000	0.80000	1.00000	0.90000	1.00000	0.90000	1.00000	1.00000

CETIS Test Summary

Hyalella Survival and Growth Test						Pacific EcoRisk			
Test No:	02-3950-5064	Test Type:	Survival-Growth (10 day)	Duration:	10 Days 0 Hours	Species:	Hyalella azteca	Source:	Aquatic Biosystems, CO
Start Date:	07 Oct-04	Protocol:	EPA 600/R-99-064 (2000)	DII Water:	Mod-Hard Synthetic Water	Brine:			
Ending Date:	17 Oct-04								
Setup Date:	07 Oct-04 12:00 AM								
Sample No:	10-1168-1123	Material:	Freshwater Sediment	Client:	SJCRCO	Project:			
Sample Date:	23 Sep-04	Code:	9549						
Receive Date:		Source:	SJCRCO						
Sample Age:	14 Days 0 Hours	Station:	DCAHF-017						
Comparison Summary									
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method			
08-1059-0043	Mean Weight	100	>100	N/A	9.35%	Equal Variance t			
03-2773-2080	Proportion Survived	100	>100	N/A	6.44%	Mann-Whitney U			
Mean Weight Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Control Sed	8	0.12039	0.10333	0.14500	0.00499	0.01411	11.72%	
100		8	0.15408	0.13800	0.16889	0.00399	0.01129	7.33%	
Proportion Survived Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Control Sed	8	0.93750	0.80000	1.00000	0.03239	0.09161	9.77%	
100		8	0.95000	0.90000	1.00000	0.01890	0.05345	5.63%	
Mean Weight Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.10625	0.14600	0.12200	0.12700	0.11750	0.13200	0.11000	0.10333
100		0.16556	0.16889	0.14222	0.14500	0.16000	0.15800	0.15400	0.13800
Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.80000	1.00000	1.00000	1.00000	0.80000	1.00000	1.00000	0.90000
100		0.90000	0.90000	0.90000	1.00000	0.90000	1.00000	1.00000	1.00000

CETIS Test Summary

Hyalella Survival and Growth Test						Pacific EcoRisk			
Test No:	02-3950-5064	Test Type:	Survival-Growth (10 day)	Duration:	10 Days 0 Hours	Species:	Hyalella azteca	Source:	Aquatic Biosystems, CO
Start Date:	07 Oct-04	Protocol:	EPA 600/R-99-064 (2000)	Dil Water:	Mod-Hard Synthetic Water	Brine:			
Ending Date:	17 Oct-04								
Setup Date:	07 Oct-04 12:00 AM								
Sample No:	08-6348-8786	Material:	Freshwater Sediment	Client:	SJCRCD				
Sample Date:	23 Sep-04	Code:	9549	Project:					
Receive Date:		Source:	SJCRCD						
Sample Age:	14 Days 0 Hours	Station:	02-LCAJR-024						
Comparison Summary									
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method			
14-8250-8477	Mean Weight	100	>100	N/A	10.20%	Equal Variance t			
20-6346-2213	Proportion Survived	100	>100	N/A	13.79%	Equal Variance t			
Mean Weight Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Control Sed	8	0.12039	0.10333	0.14500	0.00499	0.01411	11.72%	
100		8	0.18127	0.16000	0.20143	0.00487	0.01378	7.60%	
Proportion Survived Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Control Sed	8	0.93750	0.80000	1.00000	0.03239	0.09161	9.77%	
100		8	0.81250	0.30000	1.00000	0.08332	0.23566	29.00%	
Mean Weight Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.10625	0.14500	0.12200	0.12700	0.11750	0.13200	0.11000	0.10333
100		0.16000	0.18200	0.18100	0.19500	0.17625	0.18778	0.16667	0.20143
Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.80000	1.00000	1.00000	1.00000	0.80000	1.00000	1.00000	0.90000
100		0.80000	1.00000	1.00000	1.00000	0.80000	0.90000	0.30000	0.70000

Report Date: 04 Nov-04 10:17 AM

Link: 14-2433-8111

CETIS Test Summary

Hyalella Survival and Growth Test							Pacific EcoRisk		
Test No:	02-3950-5064	Test Type:	Survival-Growth (10 day)	Duration:	10 Days 0 Hours				
Start Date:	07 Oct-04	Protocol:	EPA 600/R-99-064 (2000)	Species:	Hyalella azteca				
Ending Date:	17 Oct-04	Dil Water:	Mod-Hard Synthetic Water	Source:	Aquatic Biosystems, CO				
Setup Date:	07 Oct-04 12:00 AM	Brine:							
Sample No:	01-5483-3574	Material:	Freshwater Sediment	Client:	SJCRCO				
Sample Date:	23 Sep-04	Code:	9549	Project:					
Receive Date:		Source:	SJCRCO						
Sample Age:	14 Days 0 Hours	Station:	LTCJR-031						
Comparison Summary									
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method			
11-5640-2210	Mean Weight	<100	100	N/A	10.20%	Equal Variance t			
11-0170-8496	Proportion Survived	100	>100	N/A	8.43%	Equal Variance t			
Mean Weight Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Control Sed	8	0.12039	0.10333	0.14500	0.00499	0.01411	11.72%	
100		8	0.09041	0.06625	0.11100	0.00487	0.01377	15.23%	
Proportion Survived Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Control Sed	8	0.93750	0.80000	1.00000	0.03239	0.09161	9.77%	
100		8	0.85000	0.70000	1.00000	0.03780	0.10690	12.58%	
Mean Weight Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.10625	0.14500	0.12200	0.12700	0.11750	0.13200	0.11000	0.10333
100		0.10572	0.09125	0.09200	0.08875	0.06625	0.08500	0.11100	0.08333
Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.80000	1.00000	1.00000	1.00000	0.80000	1.00000	1.00000	0.90000
100		0.70000	0.80000	1.00000	0.80000	0.80000	0.80000	1.00000	0.90000

Report Date: 04 Nov-04 10:10 AM

Link: 10-2829-3208

CETIS Test Summary

Hyalella Survival and Growth Test						Pacific EcoRisk			
Test No:	02-3950-5064	Test Type:	Survival-Growth (10 day)	Duration:	10 Days 0 Hours	Species:	Hyalella azteca	Source:	Aquatic Biosystems, CO
Start Date:	07 Oct-04	Protocol:	EPA 600/R-99-064 (2000)	Dil Water:	Mod-Hard Synthetic Water	Brine:			
Ending Date:	17 Oct-04								
Setup Date:	07 Oct-04 12:00 AM								
Sample No:	13-4166-1458	Material:	Freshwater Sediment	Client:	SJCRCD	Project:			
Sample Date:	23 Sep-04	Code:	9549						
Receive Date:		Source:	SJCRCD						
Sample Age:	14 Days 0 Hours	Station:	PSAHT-038						
Comparison Summary									
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method			
04-2754-3325	Mean Weight	100	>100	N/A	8.37%	Equal Variance t			
07-5842-7112	Proportion Survived	100	>100	N/A	18.75%	Mann-Whitney U			
Mean Weight Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Control Sed	8	0.12039	0.10333	0.14500	0.00499	0.01411	11.72%	
100		8	0.12985	0.11833	0.14100	0.00279	0.00790	6.09%	
Proportion Survived Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Control Sed	8	0.93750	0.80000	1.00000	0.03239	0.09161	9.77%	
100		8	0.78750	0.10000	1.00000	0.11090	0.31368	39.83%	
Mean Weight Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.10625	0.14500	0.12200	0.12700	0.11750	0.13200	0.11000	0.10333
100		0.12750	0.12000	0.14100	0.13100	0.13600	0.12900	0.11833	0.13600
Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.80000	1.00000	1.00000	1.00000	0.80000	1.00000	1.00000	0.90000
100		0.80000	0.80000	1.00000	0.10000	1.00000	1.00000	0.60000	1.00000

CETIS Test Summary

Report Date: 04 Nov-04 10:07 AM
 Link: 06-7645-3295

Hyalella Survival and Growth Test Pacific EcoRisk

Test No: 02-3950-5064	Test Type: Survival-Growth (10 day)	Duration: 10 Days 0 Hours
Start Date: 07 Oct-04	Protocol: EPA 600/R-99-064 (2000)	Species: Hyalella azteca
Ending Date: 17 Oct-04	Dil Water: Mod-Hard Synthetic Water	Source: Aquatic Biosystems, CO
Setup Date: 07 Oct-04 12:00 AM	Brine:	

Sample No: 17-4581-3371	Material: Freshwater Sediment	Client: S.JCRCD
Sample Date: 23 Sep-04	Code: 9549	Project:
Receive Date:	Source: S.JCRCD	
Sample Age: 14 Days 0 Hours	Station: MRABR-002	

Comparison Summary

Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
10-5303-8772	Mean Weight	100	>100	N/A	13.44%	Equal Variance t
03-1088-3148	Proportion Survived	100	>100	N/A	7.79%	Mann-Whitney U

Mean Weight Summary

Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Control Sed	8	0.12039	0.10333	0.14500	0.00499	0.01411	11.72%
100		8	0.17402	0.14800	0.22222	0.00771	0.02181	12.63%

Proportion Survived Summary

Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Control Sed	8	0.93750	0.80000	1.00000	0.03239	0.09161	9.77%
100		8	0.92500	0.80000	1.00000	0.03134	0.08864	9.58%

Mean Weight Detail

Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.10625	0.14500	0.12200	0.12700	0.11750	0.13200	0.11000	0.10333
100		0.16625	0.17750	0.14800	0.22222	0.18000	0.16222	0.16600	0.17000

Proportion Survived Detail

Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.80000	1.00000	1.00000	1.00000	0.80000	1.00000	1.00000	0.90000
100		0.80000	0.80000	1.00000	0.90000	1.00000	0.90000	1.00000	1.00000

Report Date: 04 Nov-04 10:09 AM

Link: 07-2562-6550

CETIS Test Summary

Hyalella Survival and Growth Test						Pacific EcoRisk			
Test No:	02-3950-5064	Test Type:	Survival-Growth (10 day)	Duration:	10 Days 0 Hours	Species:	Hyalella azteca	Source:	Aquatic Biosystems, CO
Start Date:	07 Oct-04	Protocol:	EPA 600/R-99-064 (2000)	Dil Water:	Mod-Hard Synthetic Water	Brine:			
Ending Date:	17 Oct-04								
Setup Date:	07 Oct-04 12:00 AM								
Sample No:	08-1461-9078	Material:	Freshwater Sediment	Client:	SJCRCD	Project:			
Sample Date:	23 Sep-04	Code:	9549						
Receive Date:		Source:	SJCRCD						
Sample Age:	14 Days 0 Hours	Station:	MRABR-003						
Comparison Summary									
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method			
16-1950-4287	Mean Weight	100	>100	N/A	19.22%	Equal Variance t			
06-0790-9579	Proportion Survived	100	>100	N/A	9.47%	Mann-Whitney U			
Mean Weight Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Control Sed	8	0.12039	0.10333	0.14500	0.00499	0.01411	11.72%	
100		8	0.16849	0.11750	0.20889	0.01215	0.03436	20.39%	
Proportion Survived Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Control Sed	8	0.93750	0.80000	1.00000	0.03239	0.09161	9.77%	
100		8	0.85000	0.50000	1.00000	0.05345	0.15119	17.79%	
Mean Weight Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.10625	0.14500	0.12200	0.12700	0.11750	0.13200	0.11000	0.10333
100		0.13000	0.11750	0.18600	0.18556	0.18333	0.20889	0.13889	0.19778
Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.80000	1.00000	1.00000	1.00000	0.80000	1.00000	1.00000	0.90000
100		0.50000	0.80000	1.00000	0.90000	0.90000	0.90000	0.90000	0.90000

Table 10. Physical parameters for Event #1 (August 24, 2004). PQL = Practical Quantitation Limit, DIL = dilution, DLR = PQR x Dilution.

SampleNumber	SiteCode	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	DLR	PQL	DIL	Flag	SubmissionNumber
487838	01-CRABI-021	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Color (A.P.H.A)	30	units	SM 2120 B	1	1	1		2004081857
488204	01-DCAHF-027	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Color (A.P.H.A)	100	units	SM 2120 B	20	1	20		2004081857
488215	01-LCAJR-033	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Color (A.P.H.A)	200	units	SM 2120 B	10	1	10		2004081857
488215	01-LTCJR-039	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Color (A.P.H.A)	50	units	SM 2120 B	10	1	10		2004081857
488215	01-MRABR-009	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Color (A.P.H.A)	ND	units	SM 2120 B	1	1	1		2004081857
488215	01-MRABR-010	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Color (A.P.H.A)	15	units	SM 2120 B	1	1	1		2004081857
487839	01-MRABR-011	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Color (A.P.H.A)	15	units	SM 2120 B	1	1	1		2004081857
488205	01-PSAHT-045	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Color (A.P.H.A)	25	units	SM 2120 B	1	1	1		2004081857
488217	01-CRABI-021	08/24/2004	Liquid	E	78415	08/25/2004	08/25/2004	pH	8.4	Std.Unit	SM 4500-H+ B	N/A	-	1		2004081857
488217	01-DCAHF-027	08/24/2004	Liquid	E	78415	08/25/2004	08/25/2004	pH	8.8	Std.Unit	SM 4500-H+ B	N/A	-	1		2004081857
487841	01-LCAJR-033	08/24/2004	Liquid	E	78415	08/25/2004	08/25/2004	pH	7.9	Std.Unit	SM 4500-H+ B	N/A	-	1		2004081857
488207	01-LTCJR-039	08/24/2004	Liquid	E	78415	08/25/2004	08/25/2004	pH	7.7	Std.Unit	SM 4500-H+ B	N/A	-	1		2004081857
488218	01-MRABR-009	08/24/2004	Liquid	E	78414	08/25/2004	08/25/2004	pH	5.5	Std.Unit	SM 4500-H+ B	N/A	-	1		2004081857
488218	01-MRABR-010	08/24/2004	Liquid	E	78414	08/25/2004	08/25/2004	pH	7.4	Std.Unit	SM 4500-H+ B	N/A	-	1		2004081857
488218	01-MRABR-011	08/24/2004	Liquid	E	78415	08/25/2004	08/25/2004	pH	7.5	Std.Unit	SM 4500-H+ B	N/A	-	1		2004081857
488218	01-PSAHT-045	08/24/2004	Liquid	E	78415	08/25/2004	08/25/2004	pH	8.0	Std.Unit	SM 4500-H+ B	N/A	-	1		2004081857
487835	01-CRABI-021	08/24/2004	Liquid	E	78667	08/30/2004	09/02/2004	Total Dissolved Solids (TDS)	130	mg/L	SM 2540 C	5	5	1		2004081857
487836	01-DCAHF-027	08/24/2004	Liquid	E	78667	08/30/2004	09/02/2004	Total Dissolved Solids (TDS)	140	mg/L	SM 2540 C	5	5	1		2004081857
487837	01-LCAJR-033	08/24/2004	Liquid	E	78667	08/30/2004	09/02/2004	Total Dissolved Solids (TDS)	70	mg/L	SM 2540 C	5	5	1		2004081857
488201	01-LTCJR-039	08/24/2004	Liquid	E	78667	08/30/2004	09/02/2004	Total Dissolved Solids (TDS)	71	mg/L	SM 2540 C	5	5	1		2004081857
488202	01-MRABR-009	08/24/2004	Liquid	E	78540	08/27/2004	08/31/2004	Total Dissolved Solids (TDS)	ND	mg/L	SM 2540 C	5	5	1		2004081857
488203	01-MRABR-010	08/24/2004	Liquid	E	78667	08/30/2004	09/02/2004	Total Dissolved Solids (TDS)	37	mg/L	SM 2540 C	5	5	1		2004081857
488212	01-MRABR-011	08/24/2004	Liquid	E	78667	08/30/2004	09/02/2004	Total Dissolved Solids (TDS)	38	mg/L	SM 2540 C	5	5	1		2004081857
488212	01-PSAHT-045	08/24/2004	Liquid	E	78667	08/30/2004	09/02/2004	Total Dissolved Solids (TDS)	120	mg/L	SM 2540 C	5	5	1		2004081857
488214	01-CRABI-021	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Turbidity	6.0	NTU	SM 2130 B	0.1	0.1	1		2004081857
488214	01-DCAHF-027	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Turbidity	110	NTU	SM 2130 B	2.0	0.1	20		2004081857
487842	01-LCAJR-033	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Turbidity	73	NTU	SM 2130 B	2.0	0.1	20		2004081857

488208	01-LTCJR-039	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Turbidity	25	NTU	SM 2130 B	0.5	0.1	5	2004081857
488219	01-MRABR-009	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Turbidity	ND	NTU	SM 2130 B	0.1	0.1	1	2004081857
488219	01-MRABR-010	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Turbidity	6.1	NTU	SM 2130 B	0.1	0.1	1	2004081857
488219	01-MRABR-011	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Turbidity	6.2	NTU	SM 2130 B	0.1	0.1	1	2004081857
488219	01-PSAHT-045	08/24/2004	Liquid	E	78391	08/25/2004	08/25/2004	Turbidity	7.7	NTU	SM 2130 B	0.1	0.1	1	2004081857

Table 10a. TOC for Event #1 (August 24, 2004). See Table 10 for Abbreviations.

SampleNumber	SiteCode	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	DLR	PQL	DIL	Flag	SubmissionNumber
488212	01-CRABI-020	08/24/2004	Liquid	E	78831	09/01/2004	09/01/2004	Total Organic Carbon (TOC)	5.2	mg/L	SM 5310-C	0.2	0.2	1		2004081853
488212	01-DCAHF-026	08/24/2004	Liquid	E	78862	09/02/2004	09/02/2004	Total Organic Carbon (TOC)	4.6	mg/L	SM 5310-C	0.4	0.2	2		2004081853
488213	01-LCAJR-032	08/24/2004	Liquid	E	78831	09/01/2004	09/01/2004	Total Organic Carbon (TOC)	3.5	mg/L	SM 5310-C	0.4	0.2	2		2004081853
488213	01-LTCJR-038	08/24/2004	Liquid	E	78831	09/01/2004	09/01/2004	Total Organic Carbon (TOC)	5.1	mg/L	SM 5310-C	0.4	0.2	2		2004081853
488213	01-MRABR-006	08/24/2004	Liquid	E	78831	09/01/2004	09/01/2004	Total Organic Carbon (TOC)	ND	mg/L	SM 5310-C	0.2	0.2	1		2004081853
488213	01-MRABR-007	08/24/2004	Liquid	E	78862	09/02/2004	09/02/2004	Total Organic Carbon (TOC)	1.9	mg/L	SM 5310-C	0.2	0.2	1		2004081853
488214	01-MRABR-008	08/24/2004	Liquid	E	78831	09/01/2004	09/01/2004	Total Organic Carbon (TOC)	2.6	mg/L	SM 5310-C	0.2	0.2	1		2004081853
488214	01-PSAHT-044	08/24/2004	Liquid	E	78831	09/01/2004	09/01/2004	Total Organic Carbon (TOC)	2.2	mg/L	SM 5310-C	0.2	0.2	1		2004081853

Table 11. E coli for Event #1 (August 24, 2004). See Table 9 for Abbreviations.

SampleNumber	SiteCode	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	DLR	PQL	DIL	Flag	SubmissionNumber
488216	01-CRABI-019	08/24/2004	Liquid	E	78620	08/24/2004	08/24/2004	E. coli (3x5 MTF)	50	MPN/100mLs	SM 9221-B/F	2	2	1		2004081775
488216	01-DCAHF-025	08/24/2004	Liquid	E	78620	08/24/2004	08/24/2004	E. coli (3x5 MTF)	130	MPN/100mLs	SM 9221-B/F	2	2	1		2004081775
488216	01-LCAJR-031	08/24/2004	Liquid	E	78620	08/24/2004	08/24/2004	E. coli (3x5 MTF)	130	MPN/100mLs	SM 9221-B/F	2	2	1		2004081775
488216	01-LTCJR-037	08/24/2004	Liquid	E	78620	08/24/2004	08/24/2004	E. coli (3x5 MTF)	500	MPN/100mLs	SM 9221-B/F	2	2	1		2004081775
487840	01-MRABR-003	08/24/2004	Liquid	E	78620	08/24/2004	08/24/2004	E. coli (3x5 MTF)	<2	MPN/100mLs	SM 9221-B/F	2	2	1		2004081775
488206	01-MRABR-004	08/24/2004	Liquid	E	78620	08/24/2004	08/24/2004	E. coli (3x5 MTF)	11	MPN/100mLs	SM 9221-B/F	2	2	1		2004081775
488217	01-MRABR-005	08/24/2004	Liquid	E	78620	08/24/2004	08/24/2004	E. coli (3x5 MTF)	11	MPN/100mLs	SM 9221-B/F	2	2	1		2004081775
488217	01-PSAHT-043	08/24/2004	Liquid	E	78620	08/24/2004	08/24/2004	E. coli (3x5 MTF)	4	MPN/100mLs	SM 9221-B/F	2	2	1		2004081775

Table12. Physical parameters for Event #2 (September 23, 2004). See Table 9 for Abbreviations.

SampleNumber	SiteCode	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	DLR	PQL	DIL	Flag	SubmissionNumber
500727	02-MRABR-006	09/23/2004	Liquid	E	80116	09/25/2004	09/25/2004	Color (A.P.H.A)	5.0	units	SM 2120 B	1	1	1		2004091892
500728	02-CRABI-013	09/23/2004	Liquid	E	80116	09/25/2004	09/25/2004	Color (A.P.H.A)	20	units	SM 2120 B	1	1	1		2004091892
500729	02-DCAHF-020	09/23/2004	Liquid	E	80116	09/25/2004	09/25/2004	Color (A.P.H.A)	300	units	SM 2120 B	10	1	10		2004091892
500730	02-LCAJR-027	09/23/2004	Liquid	E	80116	09/25/2004	09/25/2004	Color (A.P.H.A)	50	units	SM 2120 B	5	1	5		2004091892
500731	02-LTCJR-034	09/23/2004	Liquid	E	80116	09/25/2004	09/25/2004	Color (A.P.H.A)	50	units	SM 2120 B	5	1	5		2004091892
500732	02-PSAHT-041	09/23/2004	Liquid	E	80116	09/25/2004	09/25/2004	Color (A.P.H.A)	15	units	SM 2120 B	1	1	1		2004091892
500727	02-MRABR-006	09/23/2004	Liquid	E	80188	09/27/2004	09/27/2004	pH	7.4	Std.Unit	SM 4500-H+ B	N/A	-	1		2004091892
500728	02-CRABI-013	09/23/2004	Liquid	E	80188	09/27/2004	09/27/2004	pH	8.2	Std.Unit	SM 4500-H+ B	N/A	-	1		2004091892
500729	02-DCAHF-020	09/23/2004	Liquid	E	80188	09/27/2004	09/27/2004	pH	8.6	Std.Unit	SM 4500-H+ B	N/A	-	1		2004091892
500730	02-LCAJR-027	09/23/2004	Liquid	E	80188	09/27/2004	09/27/2004	pH	8.1	Std.Unit	SM 4500-H+ B	N/A	-	1		2004091892
500731	02-LTCJR-034	09/23/2004	Liquid	E	80188	09/27/2004	09/27/2004	pH	7.7	Std.Unit	SM 4500-H+ B	N/A	-	1		2004091892
500732	02-PSAHT-041	09/23/2004	Liquid	E	80188	09/27/2004	09/27/2004	pH	7.9	Std.Unit	SM 4500-H+ B	N/A	-	1		2004091892
500727	02-MRABR-006	09/23/2004	Liquid	E	80335	09/29/2004	10/02/2004	Total Dissolved Solids (TDS)	37	mg/L	SM 2540 C	5	5	1		2004091892
500728	02-CRABI-013	09/23/2004	Liquid	E	80335	09/29/2004	10/02/2004	Total Dissolved Solids (TDS)	130	mg/L	SM 2540 C	5	5	1		2004091892
500729	02-DCAHF-020	09/23/2004	Liquid	E	80335	09/29/2004	10/02/2004	Total Dissolved Solids (TDS)	270	mg/L	SM 2540 C	5	5	1		2004091892
500730	02-LCAJR-027	09/23/2004	Liquid	E	80335	09/29/2004	10/02/2004	Total Dissolved Solids (TDS)	350	mg/L	SM 2540 C	5	5	1		2004091892
500731	02-LTCJR-034	09/23/2004	Liquid	E	80335	09/29/2004	10/02/2004	Total Dissolved Solids (TDS)	96	mg/L	SM 2540 C	5	5	1		2004091892
500732	02-PSAHT-041	09/23/2004	Liquid	E	80335	09/29/2004	10/02/2004	Total Dissolved Solids (TDS)	110	mg/L	SM 2540 C	5	5	1		2004091892
500727	02-MRABR-006	09/23/2004	Liquid	E	80116	09/25/2004	09/25/2004	Turbidity	2.0	NTU	SM 2130 B	0.1	0.1	1		2004091892
500728	02-CRABI-013	09/23/2004	Liquid	E	80116	09/25/2004	09/25/2004	Turbidity	4.2	NTU	SM 2130 B	0.1	0.1	1		2004091892
500729	02-DCAHF-020	09/23/2004	Liquid	E	80116	09/25/2004	09/25/2004	Turbidity	100	NTU	SM 2130 B	1.0	0.1	10		2004091892
500730	02-LCAJR-027	09/23/2004	Liquid	E	80116	09/25/2004	09/25/2004	Turbidity	29	NTU	SM 2130 B	0.5	0.1	5		2004091892
500731	02-LTCJR-034	09/23/2004	Liquid	E	80116	09/25/2004	09/25/2004	Turbidity	20	NTU	SM 2130 B	0.5	0.1	5		2004091892
500732	02-PSAHT-041	09/23/2004	Liquid	E	80116	09/25/2004	09/25/2004	Turbidity	4.8	NTU	SM 2130 B	0.1	0.1	1		2004091892

Table 13. TOC for Event #2 (September 23, 2004). See Table 9 for Abbreviations.

SampleNumber	SiteCode	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	DLR	PQL	DIL	Flag	SubmissionNumber
500721	02-MRABR-005	09/23/2004	Liquid	E	81017	10/08/2004	10/08/2004	Total Organic Carbon (TOC)	1.7	mg/L	SM 5310-C	0.2	0.2	1		2004091891
500722	02-CRABI-012	09/23/2004	Liquid	E	80608	10/04/2004	10/04/2004	Total Organic Carbon (TOC)	45	mg/L	SM 5310-C	2.0	0.2	10		2004091891
500723	02-DCAHF-019	09/23/2004	Liquid	E	80608	10/04/2004	10/04/2004	Total Organic Carbon (TOC)	6.9	mg/L	SM 5310-C	0.2	0.2	1		2004091891
500724	02-LCAJR-026	09/23/2004	Liquid	E	80608	10/04/2004	10/04/2004	Total Organic Carbon (TOC)	4.9	mg/L	SM 5310-C	0.2	0.2	1		2004091891
500725	02-LTCJR-033	09/23/2004	Liquid	E	80610	10/05/2004	10/05/2004	Total Organic Carbon (TOC)	1.6	mg/L	SM 5310-C	0.2	0.2	1		2004091891
500726	02-PSAHT-040	09/23/2004	Liquid	E	80610	10/05/2004	10/05/2004	Total Organic Carbon (TOC)	1.8	mg/L	SM 5310-C	0.2	0.2	1		2004091891

Table 14. E. coli for Event #2 (September 23, 2004). See Table 9 for Abbreviations.

SampleNumber	SiteCode	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	DLR	PQL	DIL	Flag	SubmissionNumber
500040	02-MRABR-004	09/23/2004	Liquid	E	80208	09/24/2004	09/24/2004	E. coli (3x5 MTF)	30	MPN/100mLs	SM 9221-B/F	2	2	1		2004091750
500041	02-CRABI-011	09/23/2004	Liquid	E	80208	09/24/2004	09/24/2004	E. coli (3x5 MTF)	30	MPN/100mLs	SM 9221-B/F	2	2	1		2004091750
500042	02-DCAHF-018	09/23/2004	Liquid	E	80208	09/24/2004	09/24/2004	E. coli (3x5 MTF)	8	MPN/100mLs	SM 9221-B/F	2	2	1		2004091750
500043	02-LCAJR-025	09/23/2004	Liquid	E	80208	09/24/2004	09/24/2004	E. coli (3x5 MTF)	26	MPN/100mLs	SM 9221-B/F	2	2	1		2004091750
500044	02-LTCJR-032	09/23/2004	Liquid	E	80208	09/24/2004	09/24/2004	E. coli (3x5 MTF)	170	MPN/100mLs	SM 9221-B/F	2	2	1		2004091750
500045	02-PSAHT-039	09/23/2004	Liquid	E	80208	09/24/2004	09/24/2004	E. coli (3x5 MTF)	2	MPN/100mLs	SM 9221-B/F	2	2	1		2004091750

Table 15. Pesticide data for Event #1 (August 24, 2004). See Table 9 for Abbreviations.

Sample Number	Site Code	Sample Date	Sample Type	Analyte	Results	Units	Method	DLR	PQL	DIL	Prep Date	Analysis Date	Submission Number
01-CRABI-023	CRABI	08/24/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 1940	45189
01-DCAHF-029	DCAHF	08/24/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 2009	45189
01-LCAJR-035	LCAJR	08/24/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 2038	45189
01-LTCJR-041	LTCJR	08/24/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/28/2004 0426	45189
01-MRABR-015	MRABR	08/24/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 1812	45189
01-MRABR-016	MRABR	08/24/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 1841	45189
01-MRABR-017	MRABR	08/24/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 1911	45189
01-PSAHT-047	PSAHT	08/24/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/28/2004 0455	45189
01-CRABI-022	CRABI	08/24/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	08/27/2004 1545	09/02/2004 0811	45189
01-DCAHF-028	DCAHF	08/24/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	08/27/2004 1545	09/02/2004 0826	45189
01-LCAJR-034	LCAJR	08/24/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	08/27/2004 1545	09/02/2004 0841	45189
01-LTCJR-040	LTCJR	08/24/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	08/27/2004 1545	09/02/2004 0856	45189
01-MRABR-014	MRABR	08/24/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	08/27/2004 1545	09/02/2004 0757	45189
01-PSAHT-046	PSAHT	08/24/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	08/27/2004 1545	09/02/2004 0910	45189
01-CRABI-023	CRABI	08/24/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 1940	45189
01-DCAHF-029	DCAHF	08/24/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 2009	45189
01-LCAJR-035	LCAJR	08/24/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 2038	45189
01-LTCJR-041	LTCJR	08/24/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/28/2004 0426	45189
01-MRABR-015	MRABR	08/24/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 1812	45189
01-MRABR-016	MRABR	08/24/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 1841	45189
01-MRABR-017	MRABR	08/24/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 1911	45189
01-PSAHT-047	PSAHT	08/24/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/28/2004 0455	45189
01-CRABI-022	CRABI	08/24/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	08/02/2004 0811	45189
01-DCAHF-028	DCAHF	08/24/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0826	45189
01-LCAJR-034	LCAJR	08/24/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0841	45189
01-LTCJR-040	LTCJR	08/24/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0856	45189

01-MRABR-014	MRABR	08/24/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0757	45189
01-PSAHT-046	PSAHT	08/24/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0910	45189
01-CRABI-022	CRABI	08/24/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0811	45189
01-DCAHF-028	DCAHF	08/24/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0826	45189
01-LCAJR-034	LCAJR	08/24/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0841	45189
01-LTCJR-040	LTCJR	08/24/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0856	45189
01-MRABR-014	MRABR	08/24/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0757	45189
01-PSAHT-046	PSAHT	08/24/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0910	45189
01-CRABI-022	CRABI	08/24/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0811	45189
01-DCAHF-028	DCAHF	08/24/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0826	45189
01-LCAJR-034	LCAJR	08/24/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0841	45189
01-LTCJR-040	LTCJR	08/24/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0856	45189
01-MRABR-014	MRABR	08/24/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0757	45189
01-PSAHT-046	PSAHT	08/24/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0910	45189
01-CRABI-022	CRABI	08/24/2004	E	Surrogate: DECA	64.6	% Recovery	EPA 8081A	25-143	25-143	1	08/27/2004 1545	09/02/2004 0811	45189
01-DCAHF-028	DCAHF	08/24/2004	E	Surrogate: DECA	71.2	% Recovery	EPA 8081A	25-143	25-143	1	08/27/2004 1545	09/02/2004 0826	45189
01-LCAJR-034	LCAJR	08/24/2004	E	Surrogate: DECA	69.3	% Recovery	EPA 8081A	25-143	25-143	1	08/27/2004 1545	09/02/2004 0841	45189
01-LTCJR-040	LTCJR	08/24/2004	E	Surrogate: DECA	62.5	% Recovery	EPA 8081A	25-143	25-143	1	08/27/2004 1545	09/02/2004 0856	45189
01-MRABR-014	MRABR	08/24/2004	E	Surrogate: DECA	71.0	% Recovery	EPA 8081A	25-143	25-143	1	08/27/2004 1545	09/02/2004 0757	45189
01-PSAHT-046	PSAHT	08/24/2004	E	Surrogate: DECA	72.0	% Recovery	EPA 8081A	25-143	25-143	1	08/27/2004 1545	09/02/2004 0910	45189
01-CRABI-022	CRABI	08/24/2004	E	Surrogate: TCmX	35.1	% Recovery	EPA 8081A	25-144	25-144	1	08/27/2004 1545	09/02/2004 0811	45189
01-DCAHF-028	DCAHF	08/24/2004	E	Surrogate: TCmX	47.0	% Recovery	EPA 8081A	25-144	25-144	1	08/27/2004 1545	09/02/2004 0826	45189
01-LCAJR-034	LCAJR	08/24/2004	E	Surrogate: TCmX	44.7	% Recovery	EPA 8081A	25-144	25-144	1	08/27/2004 1545	09/02/2004 0841	45189
01-LTCJR-040	LTCJR	08/24/2004	E	Surrogate: TCmX	37.2	% Recovery	EPA 8081A	25-144	25-144	1	08/27/2004 1545	09/02/2004 0856	45189
01-MRABR-014	MRABR	08/24/2004	E	Surrogate: TCmX	38.3	% Recovery	EPA 8081A	25-144	25-144	1	08/27/2004 1545	09/02/2004 0757	45189
01-PSAHT-046	PSAHT	08/24/2004	E	Surrogate: TCmX	41.1	% Recovery	EPA 8081A	25-144	25-144	1	08/27/2004 1545	09/02/2004 0910	45189
01-CRABI-023	CRABI	08/24/2004	E	Surrogate: Tributylphosphate	98.3	% Recovery	EPA 8141A	60-150	60-150	1	08/27/2004 1545	09/24/2004 1940	45189
01-DCAHF-029	DCAHF	08/24/2004	E	Surrogate: Tributylphosphate	92.9	% Recovery	EPA 8141A	60-150	60-150	1	08/27/2004 1545	09/24/2004 2009	45189
01-LCAJR-035	LCAJR	08/24/2004	E	Surrogate: Tributylphosphate	95.1	% Recovery	EPA 8141A	60-150	60-150	1	08/27/2004 1545	09/24/2004 2038	45189
01-LTCJR-041	LTCJR	08/24/2004	E	Surrogate: Tributylphosphate	101	% Recovery	EPA 8141A	60-150	60-150	1	08/27/2004 1545	09/28/2004 0426	45189
01-MRABR-015	MRABR	08/24/2004	E	Surrogate: Tributylphosphate	91.0	% Recovery	EPA 8141A	60-150	60-150	1	08/27/2004 1545	09/24/2004 1812	45189

01-MRABR-016	MRABR	08/24/2004	E	Surrogate:	98.7	%	EPA	60-150	60-150	1	08/27/2004	09/24/2004	45189
				Tributylphosphate		Recovery	8141A				1545	1841	
01-MRABR-017	MRABR	08/24/2004	E	Surrogate:	82.6	%	EPA	60-150	60-150	1	08/27/2004	09/24/2004	45189
				Tributylphosphate		Recovery	8141A				1545	1911	
01-PSAHT-047	PSAHT	08/24/2004	E	Surrogate:	105	%	EPA	60-150	60-150	1	08/27/2004	09/28/2004	45189
				Tributylphosphate		Recovery	8141A				1545	0455	
01-CRABI-023	CRABI	08/24/2004	E	Surrogate:	81.7	%	EPA	56-129	56-129	1	08/27/2004	09/24/2004	45189
				Triphenylphosphate		Recovery	8141A				1545	1940	
01-DCAHF-029	DCAHF	08/24/2004	E	Surrogate:	78.7	%	EPA	56-129	56-129	1	08/27/2004	09/24/2004	45189
				Triphenylphosphate		Recovery	8141A				1545	2009	
01-LCAJR-035	LCAJR	08/24/2004	E	Surrogate:	78.4	%	EPA	56-129	56-129	1	08/27/2004	09/24/2004	45189
				Triphenylphosphate		Recovery	8141A				1545	2038	
01-LTCJR-041	LTCJR	08/24/2004	E	Surrogate:	88.9	%	EPA	56-129	56-129	1	08/27/2004	09/28/2004	45189
				Triphenylphosphate		Recovery	8141A				1545	0426	
01-MRABR-015	MRABR	08/24/2004	E	Surrogate:	74.1	%	EPA	56-129	56-129	1	08/27/2004	09/24/2004	45189
				Triphenylphosphate		Recovery	8141A				1545	1812	
01-MRABR-016	MRABR	08/24/2004	E	Surrogate:	81.8	%	EPA	56-129	56-129	1	08/27/2004	09/24/2004	45189
				Triphenylphosphate		Recovery	8141A				1545	1841	
01-MRABR-017	MRABR	08/24/2004	E	Surrogate:	75.9	%	EPA	56-129	56-129	1	08/27/2004	09/24/2004	45189
				Triphenylphosphate		Recovery	8141A				1545	1911	
01-PSAHT-047	PSAHT	08/24/2004	E	Surrogate:	91.4	%	EPA	56-129	56-129	1	08/27/2004	09/28/2004	45189
				Triphenylphosphate		Recovery	8141A				1545	0455	
01-MRABR-012	MRABR	08/24/2004	FB	Cypermethrin	Not detected	ug/L	EPA	0.10	0.10	1	08/27/2004	09/02/2004	45189
							8081A				1545	0727	
01-MRABR-012	MRABR	08/24/2004	FB	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA	0.02	0.02	1	08/27/2004	09/02/2004	45189
							8081A				1545	0727	
01-MRABR-012	MRABR	08/24/2004	FB	Lambda cyhalothrin	Not detected	ug/L	EPA	0.02	0.02	1	08/27/2004	09/02/2004	45189
							8081A				1545	0727	
01-MRABR-012	MRABR	08/24/2004	FB	Permethrin	Not detected	ug/L	EPA	0.02	0.02	1	08/27/2004	09/02/2004	45189
							8081A				1545	0727	
01-MRABR-012	MRABR	08/24/2004	FB	Surrogate: DECA	65.7	%	EPA	25-143	25-143	1	08/27/2004	09/02/2004	45189
						Recovery	8081A				1545	0727	
01-MRABR-012	MRABR	08/24/2004	FB	Surrogate: TCmX	44.6	%	EPA	25-144	25-144	1	08/27/2004	09/02/2004	45189
						Recovery	8081A				1545	0727	
01-MRABR-013	MRABR	08/24/2004	FD	Cypermethrin	Not detected	ug/L	EPA	0.10	0.10	1	08/27/2004	09/02/2004	45189
							8081A				1545	0742	
01-MRABR-013	MRABR	08/24/2004	FD	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA	0.02	0.02	1	08/27/2004	09/02/2004	45189
							8081A				1545	0742	
01-MRABR-013	MRABR	08/24/2004	FD	Lambda cyhalothrin	Not detected	ug/L	EPA	0.02	0.02	1	08/27/2004	09/02/2004	45189
							8081A				1545	0742	
01-MRABR-013	MRABR	08/24/2004	FD	Permethrin	Not detected	ug/L	EPA	0.02	0.02	1	08/27/2004	09/02/2004	45189
							8081A				1545	0742	
01-MRABR-013	MRABR	08/24/2004	FD	Surrogate: DECA	64.9	%	EPA	25-143	25-143	1	08/27/2004	09/02/2004	45189
						Recovery	8081A				1545	0742	
01-MRABR-013	MRABR	08/24/2004	FD	Surrogate: TCmX	47.5	%	EPA	25-144	25-144	1	08/27/2004	09/02/2004	45189
						Recovery	8081A				1545	0742	

Table 16. Pesticide data for Event #2 (September 23, 2004). See Table 9 for Abbreviations.

Sample Number	Site Code	Sample Date	Sample Type	Analyte	Results	Units	Method	DLR	PQL	DIL	Prep Date	Analysis Date	Submission Number
02-CRABI-015	CRABI	09/23/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1135	10/07/2004 0916	45432
02-DCAHF-022	DCAHF	09/23/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1135	10/07/2004 0945	45432
02-LCAJR-029	LCAJR	09/23/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1135	10/07/2004 1014	45432
02-LTCJR-036	LTCJR	09/23/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1135	10/07/2004 1043	45432
02-MRABR-008	MRABR	09/23/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1445	10/07/2004 0846	45432
02-PSAHT-043	PSAHT	09/23/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1445	10/07/2004 1112	45432
02-CRABI-014	CRABI	09/23/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	09/29/2004 1445	10/07/2004 1502	45432
02-DCAHF-021	DCAHF	09/23/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	09/29/2004 1445	10/07/2004 1517	45432
02-LCAJR-028	LCAJR	09/23/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	09/29/2004 1445	10/07/2004 1532	45432
02-LTCJR-035	LTCJR	09/23/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	09/29/2004 1445	10/07/2004 1546	45432
02-MRABR-007	MRABR	09/23/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	09/29/2004 1445	10/07/2004 1447	45432
02-PSAHT-042	PSAHT	09/23/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	09/29/2004 1445	10/07/2004 1601	45432
02-CRABI-015	CRABI	09/23/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1135	10/07/2004 0916	45432
02-DCAHF-022	DCAHF	09/23/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1135	10/07/2004 0945	45432
02-LCAJR-029	LCAJR	09/23/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1135	10/07/2004 1014	45432
02-LTCJR-036	LTCJR	09/23/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1135	10/07/2004 1043	45432
02-MRABR-008	MRABR	09/23/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1445	10/07/2004 0846	45432
02-PSAHT-043	PSAHT	09/23/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1445	10/07/2004 1112	45432
02-PSAHT-043	PSAHT	09/23/2004	E	Dimethoate	Not detected	ug/L	EPA 8141A	0.10	0.10	1	09/29/2004 1445	10/07/2004 1112	45432
02-CRABI-014	CRABI	09/23/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1502	45432
02-DCAHF-021	DCAHF	09/23/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1517	45432
02-LCAJR-028	LCAJR	09/23/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1532	45432
02-LTCJR-035	LTCJR	09/23/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1546	45432
02-MRABR-007	MRABR	09/23/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1447	45432
02-PSAHT-042	PSAHT	09/23/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1601	45432

02-CRABI-014	CRABI	09/23/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1502	45432
02-DCAHF-021	DCAHF	09/23/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1517	45432
02-LCAJR-028	LCAJR	09/23/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1532	45432
02-LTCJR-035	LTCJR	09/23/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1546	45432
02-MRABR-007	MRABR	09/23/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1447	45432
02-PSAHT-042	PSAHT	09/23/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1601	45432
02-CRABI-014	CRABI	09/23/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1502	45432
02-DCAHF-021	DCAHF	09/23/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1517	45432
02-LCAJR-028	LCAJR	09/23/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1532	45432
02-LTCJR-035	LTCJR	09/23/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1546	45432
02-MRABR-007	MRABR	09/23/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1447	45432
02-PSAHT-042	PSAHT	09/23/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1601	45432
02-CRABI-014	CRABI	09/23/2004	E	Surrogate: DECA	69.2	%	EPA 8081A	25-143	25-143	1	09/29/2004 1445	10/07/2004 1502	45432
02-DCAHF-021	DCAHF	09/23/2004	E	Surrogate: DECA	63.7	Recovery %	EPA 8081A	25-143	25-143	1	09/29/2004 1445	10/07/2004 1517	45432
02-LCAJR-028	LCAJR	09/23/2004	E	Surrogate: DECA	69.8	Recovery %	EPA 8081A	25-143	25-143	1	09/29/2004 1445	10/07/2004 1532	45432
02-LTCJR-035	LTCJR	09/23/2004	E	Surrogate: DECA	55.4	Recovery %	EPA 8081A	25-143	25-143	1	09/29/2004 1445	10/07/2004 1546	45432
02-MRABR-007	MRABR	09/23/2004	E	Surrogate: DECA	71.2	Recovery %	EPA 8081A	25-143	25-143	1	09/29/2004 1445	10/07/2004 1447	45432
02-PSAHT-042	PSAHT	09/23/2004	E	Surrogate: DECA	64.8	Recovery %	EPA 8081A	25-143	25-143	1	09/29/2004 1445	10/07/2004 1601	45432
02-CRABI-014	CRABI	09/23/2004	E	Surrogate: TCmX	42.0	Recovery %	EPA 8081A	25-144	25-144	1	09/29/2004 1445	10/07/2004 1502	45432
02-DCAHF-021	DCAHF	09/23/2004	E	Surrogate: TCmX	61.4	Recovery %	EPA 8081A	25-144	25-144	1	09/29/2004 1445	10/07/2004 1517	45432
02-LCAJR-028	LCAJR	09/23/2004	E	Surrogate: TCmX	66.1	Recovery %	EPA 8081A	25-144	25-144	1	09/29/2004 1445	10/07/2004 1532	45432
02-LTCJR-035	LTCJR	09/23/2004	E	Surrogate: TCmX	54.0	Recovery %	EPA 8081A	25-144	25-144	1	09/29/2004 1445	10/07/2004 1546	45432
02-MRABR-007	MRABR	09/23/2004	E	Surrogate: TCmX	63.9	Recovery %	EPA 8081A	25-144	25-144	1	09/29/2004 1445	10/07/2004 1447	45432
02-PSAHT-042	PSAHT	09/23/2004	E	Surrogate: TCmX	43.9	Recovery %	EPA 8081A	25-144	25-144	1	09/29/2004 1445	10/07/2004 1601	45432
02-CRABI-015	CRABI	09/23/2004	E	Surrogate: Tributylphosphate	103	Recovery %	EPA 8141A	60-150	60-150	1	09/29/2004 1135	10/07/2004 0916	45432
02-DCAHF-022	DCAHF	09/23/2004	E	Surrogate: Tributylphosphate	99.5	Recovery %	EPA 8141A	60-150	60-150	1	09/29/2004 1135	10/07/2004 0945	45432
02-LCAJR-029	LCAJR	09/23/2004	E	Surrogate: Tributylphosphate	102	Recovery %	EPA 8141A	60-150	60-150	1	09/29/2004 1135	10/07/2004 1014	45432
02-LTCJR-036	LTCJR	09/23/2004	E	Surrogate: Tributylphosphate	93.4	Recovery %	EPA 8141A	60-150	60-150	1	09/29/2004 1135	10/07/2004 1043	45432
02-MRABR-008	MRABR	09/23/2004	E	Surrogate: Tributylphosphate	99.0	Recovery %	EPA 8141A	60-150	60-150	1	09/29/2004 1445	10/07/2004 0846	45432
02-PSAHT-043	PSAHT	09/23/2004	E	Surrogate: Tributylphosphate	103	Recovery %	EPA 8141A	60-150	60-150	1	09/29/2004 1445	10/07/2004 1112	45432
02-CRABI-015	CRABI	09/23/2004	E	Surrogate: Triphenylphosphate	103	Recovery %	EPA 8141A	56-129	56-129	1	09/29/2004 1135	10/07/2004 0916	45432

02-DCAHF-022	DCAHF	09/23/2004	E	Surrogate	107	%	EPA	56-129	56-129	1	09/29/2004	10/07/2004	45432
				Triphenylphosphate		Recovery	8141A				1135	0945	
02-LCAJR-029	LCAJR	09/23/2004	E	Surrogate	98.4	%	EPA	56-129	56-129	1	09/29/2004	10/07/2004	45432
				Triphenylphosphate		Recovery	8141A				1135	1014	
02-LTCJR-036	LTCJR	09/23/2004	E	Surrogate	92.7	%	EPA	56-129	56-129	1	09/29/2004	10/07/2004	45432
				Triphenylphosphate		Recovery	8141A				1135	1043	
02-MRABR-008	MRABR	09/23/2004	E	Surrogate	94.2	%	EPA	56-129	56-129	1	09/29/2004	10/07/2004	45432
				Triphenylphosphate		Recovery	8141A				1445	0846	
02-PSAHT-043	PSAHT	09/23/2004	E	Surrogate	102	%	EPA	56-129	56-129	1	09/29/2004	10/07/2004	45432
				Triphenylphosphate		Recovery	8141A				1445	1112	

Analytical Method SOPs

After discussions with Regional Board staff, the reporting limits for diazinon and chloryprifos were lowered to 0.02 µg/L.

There were no deviations from the SOPs as provided in the QAPP. These are

- Water Column Toxicity – Appendix B, Attachments 1-3
- Sediment Toxicity – Appendix B, Attachment 4
- Organophosphorus Pesticides – Appendix B, Attachment 5
- Pyrethroid Pesticides – Appendix B, Attachment 6
- Color – Appendix B, Attachment 7
- Turbidity – Appendix B, Attachment 8
- TDS – Appendix B, Attachment 9
- TOC – Appendix B, Attachment 10
- *E. coli* – SOP not provided in original or amended QAPP, SOP attached to this section

BSK Analytical Laboratories

SOP#: 0403006.2

Revision#: 1

Date: 04/01/05

E. coli by Multiple Tube Fermentation SM 9221F

1. Scope and Application
 - 1.1 Analytes: E. coli
 - 1.2 Detection Limit: 1.1 E. coli organism per 100 mL sample for a ten tube (1X10) test and 2 organisms per 100 mL for a 15 tube (3X5) test.
 - 1.3 Applicable Matrices: The E. coli MTF technique is applicable for the examination of E. coli in drinking water, waste water, and a variety of natural waters.
 - 1.4 Dynamics Range: <1.1 to >23.0 for the 1X10 test, and <2 to >1600 for the 3X5 test.
 - 1.5 Approximate Analytical Time : 3 days
2. Summary of Method
 - 2.1 A measured volume of water is dispensed into multiple tubes of Lauryl Tryptose Broth and incubated at 35C for 24-48 hours. Tubes showing fermentation is confirmed for presence of E. coli by transfer to EC-MUG media and incubated at 44.5 °C. E.coli possess the enzyme B-glucoronidase and are capable of cleaving the substrate MUG to release the fluoregen.
3. Comments
 - 3.1 Interference: Some glass test tubes have are naturally fluorecent under UV light. Transfer cultures in such tubes to another tube before determining results.
 - 3.2 Helpful Hints:
4. Safety Issues: Some E. coli are pathogens. Handle positive tubes using aseptic technique. Media with growth regardless whether E. coli positive or negative must be autoclaved before handing over to glassware washing.
5. Sample Collection, Preservation, Containers, and Holding Times
 - 5.1 Containers: Pre-sterilized plastic 120mL bottles with sodium thiosulfate.
 - 5.2 Storage: Refrigerate at 4⁰C
 - 5.3 Hold time: 30 hours for potable water and 6 hours for waste water.
6. Apparatus
 - 6.1 20 X 150 mm test tubes
 - 6.2 10 ml pipets
 - 6.3 1 ml pipets
 - 6.4 3mm inoculating loops
 - 6.5 ¼ dram vials (or 9x30mm)

- 6.6 Water bath at 44.5 +/- 0.2 °C
- 6.7 UV lamp (6W)
- 7. Reagents and Standards
 - 7.1 Lauryl Tryptose Broth (LTB)
 - 7.2 EC-MUG Media
- 8. Procedure
 - 8.1 Media:

Prepare LTB and EC-MUG media according to manufacturer's instructions on the label. Dispense 10 mL LTB into test tubes containing an inverted vial. Dispense 10 mL EC-MUG into test tubes without inverted vials.
 - 8.2 Presumptive Phase:
 - 8.2.1 For potable water (1X10): Arrange 10 tubes of double strength LTB in a row. Pipet 10 mL of samples into each tube.
 - 8.2.1 Waste water (3X5): Arrange 5 tubes of double strength LTB in the 1st row, 5 tubes of single strength LTB in the 2nd row, and another 5 tubes of single strength LTB in a 3rd row. Pipet 10 mL sample aliquots into the 1st row, 1 mL aliquots into the 2nd row, and 0.1 mL aliquots into the 3rd row.
 - 8.2.2 Incubate tubes at 35 +/- 0.5⁰C for 24+/- 2 hours. Examine tubes for a positive presumptive reaction which is presence of turbidity *and* gas formation in the inverted vials. Re-incubate tubes with a negative reaction for another 24+/-2 hours at 35°C.
 - 8.3 Confirmed Phase:

Gently shake or rotate tubes showing positive presumptive reaction and transfer a loopful to a EC-MUG Media tube. Incubate EC-MUG Media tubes at 44+/-0.2°C for 24+/-2 hours. Examine all tubes exhibiting growth for fluorescence using a long-wavelength UV lamp. Growth and presence of bright blue fluorescence constitutes a positive reaction. Compute and record E. coli MPN densities by using the MPN Index.
- 9. QA/QC Requirements
 - 9.1 QC Samples:
 - 9.1.1 Positive Control: For every day that EC-MUG media is used, inoculate one tube with a loopful of E. coli culture. Incubate at 44.5 +/- 0.2°C for 24 +/-2 hours. Tubes should show a positive E. coli reaction.
 - 9.1.2 Negative Control: For every day that EC-MUG media is used, inoculate one tube with a loopful of K. pneumoniae culture. Incubate at 44.5 +/- 0.2°C for 24 +/-2 hours. Tubes should show a negative E. coli reaction.
 - 9.1.3 For each batch of LTB media, inoculate one tube with E. aerogenes for positive control, one tube with P. aeruginosa for negative control. Incubate tubes at 35+/-0.5 °C for 48+/-3 hours.

- 9.1.4 Media sterility control: Incubate a tube of media from each batch at 35 +/- 0.5°C for 48 +/- 3 hours. Tubes should be clear.
- 9.2 Acceptance criteria: Incubation time and temperature as specified in section 8.2 and 8.3, and QC sample reactions as specified in section 9.1.
- 9.3 Corrective Action required :
10. Calculations: Calculate E. coli density according to the MPN tables.

MPN INDEX
Ten 10 ml Portions

No. of Positive tubes	MPN per 100ml
0	<1.1
1	1.1
2	2.2
3	3.6
4	5.1
5	6.9
6	9.2
7	12.0
8	16.1
9	23.0
10	>23.0

MPN INDEX
Five Tubes Per Dilution (10ml, 1.0ml, 0.1ml)

Combination of Positives	MPN per 100ml	Combination of Positives	MPN per 100ml
0-0-0	<2	4-3-0	27
0-0-1	2	4-3-1	33
0-1-0	2	4-4-0	34
0-2-0	4	5-0-0	23
1-0-0	2	5-0-1	30
1-0-1	4	5-0-2	40
1-1-0	4	5-1-0	30
1-1-1	6	5-1-1	50
1-2-0	6	5-1-2	60
2-0-0	4	5-2-0	50
2-0-1	7	5-2-1	70
2-1-0	7	5-2-2	90
2-1-1	9	5-3-0	80
2-2-0	9	5-3-1	110
2-3-0	12	5-3-2	140
3-0-0	8	5-3-3	170
3-0-1	11	5-4-0	130
3-1-0	11	5-4-1	170
3-1-1	14	5-4-2	220
3-2-0	14	5-4-3	280
3-2-1	17	5-4-4	350
4-0-0	13	5-5-0	240
4-0-1	17	5-5-1	300
4-1-0	17	5-5-2	500
4-1-1	21	5-5-3	900
4-1-2	26	5-5-4	1600
4-2-0	22	5-5-5	>1600
4-2-1	26		

11. Reporting

- 11.1 Reporting Units: MPN per 100 mL
- 11.2 Reporting Limits: 1.1 for a ten tube (1X10) test, and 2 for a 15 tube (3X5) test.
- 11.3 Values Below Detection Limit: report as “less than” detection limit.

12. References

- 12.1 Method Source: Standard Methods 19th Edition Section 9221F
- 12.2 Deviation From source method and rationale

13. Signatures

Laboratory Director _____

Section Manager _____

QC Supervisor _____

Laboratory Data Sheets

Laboratory QC Samples

Table 17. Quality Control results for physical parameters for Event #1 (August 24, 2004).

SampleNumber	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	DLR	PQL	DIL
488402	08/26/2004	LCS	QC	78415	08/25/2004	08/25/2004	Alkalinity (as CaCO3)	110	mg/L	SM 2320 B	1	1	1
491411	08/26/2004	LCSD	QC	78415	08/25/2004	08/25/2004	Alkalinity (as CaCO3)	110	mg/L	SM 2320 B	1	1	1
491559	08/26/2004	LDUP	QC	78415	08/25/2004	08/25/2004	Alkalinity (as CaCO3)	44	mg/L	SM 2320 B	1	1	1
488403	08/26/2004	RBLK	QC	78415	08/25/2004	08/25/2004	Alkalinity (as CaCO3)	ND	mg/L	SM 2320 B	1	1	1
491412	08/26/2004	LDUP	QC	78415	08/25/2004	08/25/2004	Bicarbonate (as CaCO3)	44	mg/L	SM 2320 B	1	1	1
491560	08/26/2004	RBLK	QC	78415	08/25/2004	08/25/2004	Bicarbonate (as CaCO3)	ND	mg/L	SM 2320 B	1	1	1
488171	08/26/2004	LDUP	QC	78415	08/25/2004	08/25/2004	Carbonate (as CaCO3)	ND	mg/L	SM 2320 B	1	1	1
488171	08/26/2004	RBLK	QC	78415	08/25/2004	08/25/2004	Carbonate (as CaCO3)	ND	mg/L	SM 2320 B	1	1	1
488171	08/25/2004	LDUP	QC	78391	08/25/2004	08/25/2004	Color (A.P.H.A)	ND	units	SM 2120 B	1	1	1
488404	08/25/2004	RBLK	QC	78391	08/25/2004	08/25/2004	Color (A.P.H.A)	ND	units	SM 2120 B	1	1	1
488404	08/26/2004	LDUP	QC	78415	08/25/2004	08/25/2004	Conductivity - Specific (EC)	93	µmho/cm	SM 2510 B	1	1	1
488404	08/26/2004	LDUP	QC	78414	08/25/2004	08/25/2004	Conductivity - Specific (EC)	540	µmho/cm	SM 2510 B	1	1	1
488404	08/26/2004	RBLK	QC	78415	08/25/2004	08/25/2004	Conductivity - Specific (EC)	ND	µmho/cm	SM 2510 B	1	1	1
488404	08/26/2004	RBLK	QC	78414	08/25/2004	08/25/2004	Conductivity - Specific (EC)	ND	µmho/cm	SM 2510 B	1	1	1
488404	08/26/2004	LDUP	QC	78415	08/25/2004	08/25/2004	Hydroxide (as CaCO3)	ND	mg/L	SM 2320 B	1	1	1
488408	08/26/2004	RBLK	QC	78415	08/25/2004	08/25/2004	Hydroxide (as CaCO3)	ND	mg/L	SM 2320 B	1	1	1
488408	08/25/2004	LDUP	QC	78391	08/25/2004	08/25/2004	Odor	1.0	TON	SM 2150 B	1	1	1
489225	08/25/2004	RBLK	QC	78391	08/25/2004	08/25/2004	Odor	1.0	TON	SM 2150 B	1	1	1
489226	08/26/2004	LDUP	QC	78415	08/25/2004	08/25/2004	pH	7.9	Std. Unit	SM 4500-H+ B	N/A	-	1
489898	08/26/2004	LDUP	QC	78414	08/25/2004	08/25/2004	pH	7.4	Std. Unit	SM 4500-H+ B	N/A	-	1
489899	08/27/2004	LDUP	QC	78540	08/27/2004	08/31/2004	Total Dissolved Solids (TDS)	200	mg/L	SM 2540 C	5	5	1
491413	08/27/2004	LDUP	QC	78540	08/27/2004	08/31/2004	Total Dissolved Solids (TDS)	ND	mg/L	SM 2540 C	5	5	1
491415	08/30/2004	LDUP	QC	78667	08/30/2004	09/02/2004	Total Dissolved Solids (TDS)	37	mg/L	SM 2540 C	5	5	1
491561	08/30/2004	LDUP	QC	78667	08/30/2004	09/02/2004	Total Dissolved Solids (TDS)	660	mg/L	SM 2540 C	5	5	1
491563	08/27/2004	RBLK	QC	78540	08/27/2004	08/31/2004	Total Dissolved Solids (TDS)	ND	mg/L	SM 2540 C	5	5	1
491414	08/30/2004	RBLK	QC	78667	08/30/2004	09/02/2004	Total Dissolved Solids (TDS)	ND	mg/L	SM 2540 C	5	5	1
491416	09/02/2004	LCS	QC	78831	09/01/2004	09/01/2004	Total Organic Carbon (TOC)	5.1	mg/L	SM 5310-C	0.2	0.2	
491562	09/02/2004	LCS	QC	78862	09/02/2004	09/02/2004	Total Organic Carbon (TOC)	5.2	mg/L	SM 5310-C	0.2	0.2	1

491564	09/02/2004	LCSD	QC	78831	09/01/2004	09/01/2004	Total Organic Carbon (TOC)	5.2	mg/L	SM 5310-C	0.2	0.2	1
488172	09/02/2004	LCSD	QC	78862	09/02/2004	09/02/2004	Total Organic Carbon (TOC)	5.3	mg/L	SM 5310-C	0.2	0.2	1
488172	09/02/2004	MS	QC	78831	09/01/2004	09/01/2004	Total Organic Carbon (TOC)	4.3	mg/L	SM 5310-C	0.2	0.2	1
488172	09/02/2004	MS	QC	78831	09/01/2004	09/01/2004	Total Organic Carbon (TOC)	5.6	mg/L	SM 5310-C	0.2	0.2	1
488401	09/02/2004	MS	QC	78862	09/02/2004	09/02/2004	Total Organic Carbon (TOC)	6.2	mg/L	SM 5310-C	0.2	0.2	1
488401	09/02/2004	MS	QC	78862	09/02/2004	09/02/2004	Total Organic Carbon (TOC)	13	mg/L	SM 5310-C	0.2	0.2	1
488401	09/02/2004	MSD	QC	78831	09/01/2004	09/01/2004	Total Organic Carbon (TOC)	4.4	mg/L	SM 5310-C	0.2	0.2	1
488401	09/02/2004	MSD	QC	78831	09/01/2004	09/01/2004	Total Organic Carbon (TOC)	5.6	mg/L	SM 5310-C	0.2	0.2	1
488401	09/02/2004	MSD	QC	78862	09/02/2004	09/02/2004	Total Organic Carbon (TOC)	6.2	mg/L	SM 5310-C	0.2	0.2	1
488405	09/02/2004	MSD	QC	78862	09/02/2004	09/02/2004	Total Organic Carbon (TOC)	13	mg/L	SM 5310-C	0.2	0.2	1
489227	09/02/2004	RBLK	QC	78831	09/01/2004	09/01/2004	Total Organic Carbon (TOC)	ND	mg/L	SM 5310-C	0.2	0.2	1
489900	09/02/2004	RBLK	QC	78862	09/02/2004	09/02/2004	Total Organic Carbon (TOC)	ND	mg/L	SM 5310-C	0.2	0.2	1
491410	08/25/2004	LDUP	QC	78391	08/25/2004	08/25/2004	Turbidity	ND	NTU	SM 2130 B	0.1	0.1	1
491558	08/25/2004	RBLK	QC	78391	08/25/2004	08/25/2004	Turbidity	ND	NTU	SM 2130 B	0.1	0.1	1

Table 18. Quality Control results for physical parameters for Event #2 (September 23, 2004).

SampleNumber	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	DLR	PQL	DIL
500752	09/25/2004	LDUP	QC	80116	09/25/2004	09/25/2004	Color (A.P.H.A)	5.0	units	SM 2120 B	1	1	1
500753	09/25/2004	RBLK	QC	80116	09/25/2004	09/25/2004	Color (A.P.H.A)	ND	units	SM 2120 B	1	1	1
501074	09/27/2004	RBLK	QC	80188	09/27/2004	09/27/2004	Conductivity - Specific (EC)	ND	µmho/cm	SM 2510 B	1	1	1
501077	09/27/2004	LDUP	QC	80188	09/27/2004	09/27/2004	pH	7.5	Std. Unit	SM 4500-H+ B	N/A	-	1
502140	09/29/2004	LDUP	QC	80335	09/29/2004	10/02/2004	Total Dissolved Solids (TDS)	510	mg/L	SM 2540 C	5	5	1
502141	09/29/2004	RBLK	QC	80335	09/29/2004	10/02/2004	Total Dissolved Solids (TDS)	ND	mg/L	SM 2540 C	5	5	1
504034	10/04/2004	RBLK	QC	80610	10/05/2004	10/05/2004	Total Organic Carbon (TOC)	ND	mg/L	SM 5310-C	0.2	0.2	1
504035	10/04/2004	LCS	QC	80610	10/05/2004	10/05/2004	Total Organic Carbon (TOC)	5.1	mg/L	SM 5310-C	0.2	0.2	1
504036	10/04/2004	LCSD	QC	80610	10/05/2004	10/05/2004	Total Organic Carbon (TOC)	5.1	mg/L	SM 5310-C	0.2	0.2	1
504037	10/04/2004	MS	QC	80610	10/05/2004	10/05/2004	Total Organic Carbon (TOC)	5.3	mg/L	SM 5310-C	0.2	0.2	1
504038	10/04/2004	MSD	QC	80610	10/05/2004	10/05/2004	Total Organic Carbon (TOC)	5.3	mg/L	SM 5310-C	0.2	0.2	1
504870	10/06/2004	MS	QC	80610	10/05/2004	10/05/2004	Total Organic Carbon (TOC)	5.6	mg/L	SM 5310-C	0.2	0.2	1
504871	10/06/2004	MSD	QC	80610	10/05/2004	10/05/2004	Total Organic Carbon (TOC)	5.6	mg/L	SM 5310-C	0.2	0.2	1
505426	10/07/2004	RBLK	QC	80608	10/04/2004	10/04/2004	Total Organic Carbon (TOC)	ND	mg/L	SM 5310-C	0.2	0.2	1
505427	10/07/2004	LCS	QC	80608	10/04/2004	10/04/2004	Total Organic Carbon (TOC)	5.1	mg/L	SM 5310-C	0.2	0.2	1
505428	10/07/2004	LCSD	QC	80608	10/04/2004	10/04/2004	Total Organic Carbon (TOC)	5.1	mg/L	SM 5310-C	0.2	0.2	1
505429	10/07/2004	MS	QC	80608	10/04/2004	10/04/2004	Total Organic Carbon (TOC)	6.8	mg/L	SM 5310-C	0.2	0.2	1
505430	10/07/2004	MSD	QC	80608	10/04/2004	10/04/2004	Total Organic Carbon (TOC)	6.6	mg/L	SM 5310-C	0.2	0.2	1
506539	10/11/2004	RBLK	QC	81017	10/08/2004	10/08/2004	Total Organic Carbon (TOC)	ND	mg/L	SM 5310-C	0.2	0.2	1
506540	10/11/2004	LCS	QC	81017	10/08/2004	10/08/2004	Total Organic Carbon (TOC)	5.1	mg/L	SM 5310-C	0.2	0.2	1
506541	10/11/2004	LCSD	QC	81017	10/08/2004	10/08/2004	Total Organic Carbon (TOC)	5.1	mg/L	SM 5310-C	0.2	0.2	1
506542	10/11/2004	MS	QC	81017	10/08/2004	10/08/2004	Total Organic Carbon (TOC)	5.9	mg/L	SM 5310-C	0.2	0.2	1
506543	10/11/2004	MSD	QC	81017	10/08/2004	10/08/2004	Total Organic Carbon (TOC)	5.9	mg/L	SM 5310-C	0.2	0.2	1
506544	10/11/2004	MS	QC	81017	10/08/2004	10/08/2004	Total Organic Carbon (TOC)	8.6	mg/L	SM 5310-C	0.2	0.2	1
506545	10/11/2004	MSD	QC	81017	10/08/2004	10/08/2004	Total Organic Carbon (TOC)	8.6	mg/L	SM 5310-C	0.2	0.2	1
500752	09/25/2004	LDUP	QC	80116	09/25/2004	09/25/2004	Turbidity	1.9	NTU	SM 2130 B	0.1	0.1	1
500753	09/25/2004	RBLK	QC	80116	09/25/2004	09/25/2004	Turbidity	ND	NTU	SM 2130 B	0.1	0.1	1

Table 19. Quality Control results for pesticide analyses for Event #1 (August 24, 2004).

Sample Number	Sample Date	Sample Type	Analyte	Results	Units	Method	DLR	PQL	DIL	Prep Date	Analysis Date	Submission Number	Comment
N040827A-BLK	08/24/2004	QC	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 1546	45189	
N040827A-LCS	08/24/2004	QC	Chlorpyrifos	81.6	% Recovery	EPA 8141A	61-125	61-125	1	08/27/2004 1545	09/24/2004 1615	45189	
N040827A-MS	08/24/2004	QC	Chlorpyrifos	78.6	% Recovery	EPA 8141A	61-125	61-125	1	08/27/2004 1545	09/24/2004 1714	45189	
N040827A-MSD	08/24/2004	QC	Chlorpyrifos	80.6	% Recovery	EPA 8141A	61-125	61-125	1	08/27/2004 1545	09/24/2004 1743	45189	
L040826A-BLK	08/24/2004	QC	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	08/27/2004 1545	09/02/2004 0629	45189	
L040826A-LCS	08/24/2004	QC	Cypermethrin	99.4	% Recovery	EPA 8081A	65-135	65-135	1	08/27/2004 1545	09/02/2004 0643	45189	
L040826A-MS	08/24/2004	QC	Cypermethrin	60.5	% Recovery	EPA 8081A	65-135	65-135	1	08/27/2004 1545	09/02/2004 0658	45189	% Recovery exceeds lower control limit
L040826A-MSD	08/24/2004	QC	Cypermethrin	110	% Recovery	EPA 8081A	65-135	65-135	1	08/27/2004 1545	09/02/2004 0713	45189	
N040827A-BLK	08/24/2004	QC	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/27/2004 1545	09/24/2004 1546	45189	
N040827A-LCS	08/24/2004	QC	Diazinon	84.2	% Recovery	EPA 8141A	57-130	57-130	1	08/27/2004 1545	09/24/2004 1615	45189	
N040827A-MS	08/24/2004	QC	Diazinon	81.0	% Recovery	EPA 8141A	57-130	57-130	1	08/27/2004 1545	09/24/2004 1714	45189	
N040827A-MSD	08/24/2004	QC	Diazinon	75.0	% Recovery	EPA 8141A	57-130	57-130	1	08/27/2004 1545	09/24/2004 1743	45189	
L040826A-BLK	08/24/2004	QC	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0629	45189	
L040826A-LCS	08/24/2004	QC	Esfenvalerate/Fenvalerate	98.0	% Recovery	EPA 8081A	65-135	65-135	1	08/27/2004 1545	09/02/2004 0643	45189	
L040826A-MS	08/24/2004	QC	Esfenvalerate/Fenvalerate	60.0	% Recovery	EPA 8081A	65-135	65-135	1	08/27/2004 1545	09/02/2004 0658	45189	% Recovery exceeds lower control limit
L040826A-MSD	08/24/2004	QC	Esfenvalerate/Fenvalerate	112	% Recovery	EPA 8081A	65-135	65-135	1	08/27/2004 1545	09/02/2004 0713	45189	
L040826A-BLK	08/24/2004	QC	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0629	45189	
L040826A-LCS	08/24/2004	QC	Lambda cyhalothrin	95.5	% Recovery	EPA 8081A	65-135	65-135	1	08/27/2004 1545	09/02/2004 0643	45189	
L040826A-MS	08/24/2004	QC	Lambda cyhalothrin	57.5	% Recovery	EPA 8081A	65-135	65-135	1	08/27/2004 1545	09/02/2004 0658	45189	% Recovery exceeds lower control limit
L040826A-MSD	08/24/2004	QC	Lambda cyhalothrin	109	% Recovery	EPA 8081A	65-135	65-135	1	08/27/2004 1545	09/02/2004 0713	45189	

L040826A-BLK	08/24/2004	QC	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/27/2004 1545	09/02/2004 0629	45189	
L040826A-LCS	08/24/2004	QC	Permethrin	144	% Recovery	EPA 8081A	65-135	65-135	1	08/27/2004 1545	09/02/2004 0643	45189	% Recovery exceeds upper control limit
L040826A-MS	08/24/2004	QC	Permethrin	71.5	% Recovery	EPA 8081A	65-135	65-135	1	08/27/2004 1545	09/02/2004 0658	45189	
L040826A-MSD	08/24/2004	QC	Permethrin	167	% Recovery	EPA 8081A	65-135	65-135	1	08/27/2004 1545	09/02/2004 0713	45189	% Recovery exceeds upper control limit
L040826A-BLK	08/24/2004	QC	Surrogate: DECA	79.5	% Recovery	EPA 8081A	25-143	25-143	1	08/27/2004 1545	09/02/2004 0629	45189	
L040826A-LCS	08/24/2004	QC	Surrogate: DECA	66.0	% Recovery	EPA 8081A	25-143	25-143	1	08/27/2004 1545	09/02/2004 0643	45189	
L040826A-MS	08/24/2004	QC	Surrogate: DECA	39.7	% Recovery	EPA 8081A	25-143	25-143	1	08/27/2004 1545	09/02/2004 0658	45189	
L040826A-MSD	08/24/2004	QC	Surrogate: DECA	70.0	% Recovery	EPA 8081A	25-143	25-143	1	08/27/2004 1545	09/02/2004 0713	45189	
L040826A-BLK	08/24/2004	QC	Surrogate: TCmX	54.5	% Recovery	EPA 8081A	25-144	25-144	1	08/27/2004 1545	09/02/2004 0629	45189	
L040826A-LCS	08/24/2004	QC	Surrogate: TCmX	44.3	% Recovery	EPA 8081A	25-144	25-144	1	08/27/2004 1545	09/02/2004 0643	45189	
L040826A-MS	08/24/2004	QC	Surrogate: TCmX	214	% Recovery	EPA 8081A	25-144	25-144	1	08/27/2004 1545	09/02/2004 0658	45189	% Recovery exceeds upper control limit
L040826A-MSD	08/24/2004	QC	Surrogate: TCmX	53.3	% Recovery	EPA 8081A	25-144	25-144	1	08/27/2004 1545	09/02/2004 0713	45189	
N040827A-BLK	08/24/2004	QC	Surrogate: Tributylphosphate	125	% Recovery	EPA 8141A	60-150	60-150	1	08/27/2004 1545	09/24/2004 1546	45189	
N040827A-LCS	08/24/2004	QC	Surrogate: Tributylphosphate	98.6	% Recovery	EPA 8141A	60-150	60-150	1	08/27/2004 1545	09/24/2004 1615	45189	
N040827A-MS	08/24/2004	QC	Surrogate: Tributylphosphate	90.6	% Recovery	EPA 8141A	60-150	60-150	1	08/27/2004 1545	09/24/2004 1714	45189	
N040827A-MSD	08/24/2004	QC	Surrogate: Tributylphosphate	85.9	% Recovery	EPA 8141A	60-150	60-150	1	08/27/2004 1545	09/24/2004 1743	45189	
N040827A-BLK	08/24/2004	QC	Surrogate: Triphenylphosphate	116	% Recovery	EPA 8141A	56-129	56-129	1	08/27/2004 1545	09/24/2004 1546	45189	
N040827A-LCS	08/24/2004	QC	Surrogate: Triphenylphosphate	84.6	% Recovery	EPA 8141A	56-129	56-129	1	08/27/2004 1545	09/24/2004 1615	45189	
N040827A-MS	08/24/2004	QC	Surrogate: Triphenylphosphate	79.4	% Recovery	EPA 8141A	56-129	56-129	1	08/27/2004 1545	09/24/2004 1714	45189	
N040827A-MSD	08/24/2004	QC	Surrogate: Triphenylphosphate	75.8	% Recovery	EPA 8141A	56-129	56-129	1	08/27/2004 1545	09/24/2004 1743	45189	

Table 20. Quality Control results for pesticide analyses for Event #2 (September 23, 2004).

Sample Number	Sample Date	Sample Type	Analyte	Results	Units	Method	DLR	PQL	DIL	Prep Date	Analysis Date	Submission Number	Comment
N040929A-BLK	09/23/2004	QC	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1445	10/07/2004 0522	45432	
N040929A-LCS	09/23/2004	QC	Chlorpyrifos	109	%	EPA 8141A	61-125	61-125	1	09/29/2004 1445	10/07/2004 0649	45432	
N040929A-MS	09/23/2004	QC	Chlorpyrifos	99.4	%	EPA 8141A	61-125	61-125	1	09/29/2004 1445	10/07/2004 0748	45432	
N040929A-MSD	09/23/2004	QC	Chlorpyrifos	101	%	EPA 8141A	61-125	61-125	1	09/29/2004 1445	10/07/2004 0817	45432	
L040929A-BLK	09/23/2004	QC	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	09/29/2004 1445	10/07/2004 1319	45432	
L040929A-LCS	09/23/2004	QC	Cypermethrin	76.8	%	EPA 8081A	65-135	65-135	1	09/29/2004 1445	10/07/2004 1349	45432	
L040929A-MS	09/23/2004	QC	Cypermethrin	76.6	%	EPA 8081A	65-135	65-135	1	09/29/2004 1445	10/07/2004 1418	45432	
L040929A-MSD	09/23/2004	QC	Cypermethrin	78.2	%	EPA 8081A	65-135	65-135	1	09/29/2004 1445	10/07/2004 1433	45432	
N040929A-BLK	09/23/2004	QC	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/29/2004 1445	10/07/2004 0522	45432	
N040929A-LCS	09/23/2004	QC	Diazinon	113	%	EPA 8141A	57-130	57-130	1	09/29/2004 1445	10/07/2004 0649	45432	
N040929A-MS	09/23/2004	QC	Diazinon	95.0	%	EPA 8141A	57-130	57-130	1	09/29/2004 1445	10/07/2004 0748	45432	
N040929A-MSD	09/23/2004	QC	Diazinon	98.0	%	EPA 8141A	57-130	57-130	1	09/29/2004 1445	10/07/2004 0817	45432	
L040929A-BLK	09/23/2004	QC	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1319	45432	
L040929A-LCS	09/23/2004	QC	Esfenvalerate/Fenvalerate	70.8	%	EPA 8081A	65-135	65-135	1	09/29/2004 1445	10/07/2004 1349	45432	
L040929A-MS	09/23/2004	QC	Esfenvalerate/Fenvalerate	74.0	%	EPA 8081A	65-135	65-135	1	09/29/2004 1445	10/07/2004 1418	45432	
L040929A-MSD	09/23/2004	QC	Esfenvalerate/Fenvalerate	116	%	EPA 8081A	65-135	65-135	1	09/29/2004 1445	10/07/2004 1433	45432	
L040929A-BLK	09/23/2004	QC	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1319	45432	
L040929A-LCS	09/23/2004	QC	Lambda cyhalothrin	76.0	%	EPA 8081A	65-135	65-135	1	09/29/2004 1445	10/07/2004 1349	45432	
L040929A-MS	09/23/2004	QC	Lambda cyhalothrin	75.6	%	EPA 8081A	65-135	65-135	1	09/29/2004 1445	10/07/2004 1418	45432	
L040929A-MSD	09/23/2004	QC	Lambda cyhalothrin	83.2	%	EPA 8081A	65-135	65-135	1	09/29/2004 1445	10/07/2004 1433	45432	
L040929A-BLK	09/23/2004	QC	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/29/2004 1445	10/07/2004 1319	45432	
L040929A-LCS	09/23/2004	QC	Permethrin	125	%	EPA 8081A	65-135	65-135	1	09/29/2004 1445	10/07/2004 1349	45432	
L040929A-MS	09/23/2004	QC	Permethrin	113	%	EPA 8081A	65-135	65-135	1	09/29/2004 1445	10/07/2004 1418	45432	
L040929A-MSD	09/23/2004	QC	Permethrin	167	%	EPA 8081A	65-135	65-135	1	09/29/2004 1445	10/07/2004 1433	45432	% Recovery exceeds

L040929A-BLK	09/23/2004	QC	Surrogate: DECA	326	% Recovery	EPA 8081A	25-143	25-143	1	09/29/2004 1445	10/07/2004 1319	45432	upper control limit % Recovery exceeds upper control limit
L040929A-LCS	09/23/2004	QC	Surrogate: DECA	72.3	% Recovery	EPA 8081A	25-143	25-143	1	09/29/2004 1445	10/07/2004 1349	45432	
L040929A-MS	09/23/2004	QC	Surrogate: DECA	67.3	% Recovery	EPA 8081A	25-143	25-143	1	09/29/2004 1445	10/07/2004 1418	45432	
L040929A-MSD	09/23/2004	QC	Surrogate: DECA	68.7	% Recovery	EPA 8081A	25-143	25-143	1	09/29/2004 1445	10/07/2004 1433	45432	
L040929A-BLK	09/23/2004	QC	Surrogate: TCmX	1.23	% Recovery	EPA 8081A	25-144	25-144	1	09/29/2004 1445	10/07/2004 1319	45432	% Recovery exceeds lower control limit
L040929A-LCS	09/23/2004	QC	Surrogate: TCmX	56.0	% Recovery	EPA 8081A	25-144	25-144	1	09/29/2004 1445	10/07/2004 1349	45432	
L040929A-MS	09/23/2004	QC	Surrogate: TCmX	51.3	% Recovery	EPA 8081A	25-144	25-144	1	09/29/2004 1445	10/07/2004 1418	45432	
L040929A-MSD	09/23/2004	QC	Surrogate: TCmX	44.0	% Recovery	EPA 8081A	25-144	25-144	1	09/29/2004 1445	10/07/2004 1433	45432	
N040929A-BLK	09/23/2004	QC	Surrogate: Tributylphosphate	109	% Recovery	EPA 8141A	60-150	60-150	1	09/29/2004 1445	10/07/2004 0522	45432	
N040929A-LCS	09/23/2004	QC	Surrogate: Tributylphosphate	116	% Recovery	EPA 8141A	60-150	60-150	1	09/29/2004 1445	10/07/2004 0649	45432	
N040929A-MS	09/23/2004	QC	Surrogate: Tributylphosphate	99.5	% Recovery	EPA 8141A	60-150	60-150	1	09/29/2004 1445	10/07/2004 0748	45432	
N040929A-MSD	09/23/2004	QC	Surrogate: Tributylphosphate	101	% Recovery	EPA 8141A	60-150	60-150	1	09/29/2004 1445	10/07/2004 0817	45432	
N040929A-BLK	09/23/2004	QC	Surrogate: Triphenylphosphate	384	% Recovery	EPA 8141A	56-129	56-129	1	09/29/2004 1445	10/07/2004 0522	45432	% Recovery exceeds upper control limit
N040929A-LCS	09/23/2004	QC	Surrogate: Triphenylphosphate	114	% Recovery	EPA 8141A	56-129	56-129	1	09/29/2004 1445	10/07/2004 0649	45432	
N040929A-MS	09/23/2004	QC	Surrogate: Triphenylphosphate	92.2	% Recovery	EPA 8141A	56-129	56-129	1	09/29/2004 1445	10/07/2004 0748	45432	
N040929A-MSD	09/23/2004	QC	Surrogate: Triphenylphosphate	98.3	% Recovery	EPA 8141A	56-129	56-129	1	09/29/2004 1445	10/07/2004 0817	45432	

Toxicity Testing

Table 21. Results of *Selenastrum capricornutum* chronic toxicity testing for the two events.

	Site	Mean cells /mL x 10 ⁶
Event 1	Lab control	1.647
	01-MRABR-001	1.302*
	01-MRABR-002	0.835*
	01-CRABI-018	1.636
	01-DCAHF-024	1.810
	01-LCAJR-030	0.910*
	01-LTCJR-036	1.624
	01-PSAHT-042	1.968
Retest	Lab control	1.260
	01-MRABR-001	1.623
	01-LCAJR-030	1.990
Event 2	Lab control	1.347
	02-MRABR-001	1.216
	02-CRABI-009	1.726
	02-DCAHF-016	1.906
	02-LCAJR-023	2.333
	02-LTCJR-030	1.627
	02-PSAHT-037	1.805

*Statistically different from the laboratory control at $p = 0.05$.

Table 22. Results of *Ceriodaphnia dubia* acute toxicity testing for the two events.

	Site	% Survival
Event 1	Lab control	90
	01-MRABR-002	90
	01-CRABI-018	90
	01-DCAHF-024	100
	01-LCAJR-030	90
	01-LTCJR-036	100
	01-PSAHT-042	100
Event 2	Lab control	95
	02-MRABR-001	5*
	02-CRABI-009	100
	02-DCAHF-016	100
	02-LCAJR-023	100
	02-LTCJR-030	100
	02-PSAHT-037	100
Persistence sampling	Lab control	95
	02-MRABR-044	75

*Statistically different from the laboratory control at $p = 0.05$.

Table 23. Targeted TIE results for the Mokelumne River @ Bruella (MRABR) ambient water (collected September 23, 2004).

Ambient Water TIE Treatment	% Survival
Lab control	100
Centrifugation blank	55
C-8 SPE blank	100
100 µg/L PBO blank	100
100% MRSFD	90
100% MRSFD + centrifugation	10
100% MRSFD + C-8 SPE	5
100% MRSFD + PBO	25

Table 24. Results of the fathead minnow acute toxicity testing for the two events.

	Site	% Survival
Event 1	Lab control	95
	01-MRABR-002	95
	01-CRABI-018	100
	01-DCAHF-024	100
	01-LCAJR-030	100
	01-LTCJR-036	100
	01-PSAHT-042	100
Event 2	Lab control	100
	02-MRABR-001	95
	02-CRABI-009	100
	02-DCAHF-016	100
	02-LCAJR-023	100
	02-LTCJR-030	100
	02-PSAHT-037	100

Table 25. Results of Event 2 sediment toxicity testing on *Hyalella azteca* survival.

Site	% Survival
Lab control	93.8
02-MRABR-002	92.5
02-DCAHF-017	95.0
02-LCAJR-024	81.2
02-LTCJR-031	85.0
02-PSAHT-038	78.8

Table 26. Results of Event 2 sediment toxicity testing on *Hyalella azteca* growth.

Site	Overall mean growth (mg)
Lab control	0.120
02-MRABR-002	0.174
02-DCAHF-017	0.154
02-LCAJR-024	0.181
02-LTCJR-031	0.090*
02-PSAHT-038	0.130

*Statistically different from the laboratory control at $p = 0.05$.

Table 27. Event #1 intra-laboratory *S. capricornutum* toxicity testing of water field duplicate samples (quality control).

Treatment	Mean cells/mL x 10 ⁶
MRABR-001	1.302
MRABR-002	0.835
RPD = 43.7%	

Table 28. Event #1 intra-laboratory *C. dubia* toxicity testing of ambient water field duplicate samples (quality control).

Treatment	% Survival
MRABR-001	90
MRABR-002	90
RPD = 0%	

Table 29. Event #1 intra-laboratory fathead minnow toxicity testing of ambient water field duplicate samples (quality control).

Treatment	% Survival
MRABR-001	100
MRABR-002	95
RPD = 5%	

Table 30. Event #2 intra-laboratory fathead minnow toxicity testing of ambient water field duplicate samples (quality control).

Treatment	% Survival
MRABR-002	92.5
MRABR-003	85
RPD = 8.4%	

Raw Data

See Appendix I.

Data Interpretation

Data Assessment

Irrigation Season – Toxicity and Chemical Analyses

Event 1

Toxicity testing - Two sites, Mokelumne River at Bruella Road and Little Johns Creek at Jack Tone Road, exhibited significantly reduced algae growth compared to the laboratory controls. The laboratory was experiencing difficulties with their algae culture and the water was retested on September 8, 2004. Both samples showed no toxicity during the retest and it was concluded that the results from the original test were due to the algal culture problems at the laboratory.

No toxicity was observed in the *Ceriodaphnia* or fathead minnow tests with the survival in all samples equaling or exceeding the survival of the laboratory controls.

Water chemistry –Chemical analysis on water from all sites indicated no detections of pesticides in any sample. Field parameters met water quality objectives, however pH at the Duck Creek @ Highway 4 site was 8.8 (compared to 7.54 in the field) by the time the water reached the laboratory. Levels of E. coli were elevated in samples collected at Lone Tree Creek at Jack Tone Road (500 MPN/100 ml).

Event 2

Toxicity testing – No toxicity was observed at any site during algae testing. One site, Mokelumne River at Bruella Road exhibited significant toxicity to *Ceriodaphnia* and a second sample was collected to determine if the toxicity was persistent. In addition, a Toxicity Identification Evaluation (TIE) was performed to determine the cause of the toxicity. There was no toxicity observed in the follow-up sample indicating that the toxicity was not persistent. By the time the TIE was performed, a retest of the sample indicated that no toxicity was present and the results of the TIE were inconclusive. Consequently, no cause could be assigned to the toxicity seen at the site. The lack of persistence makes it difficult to interpret the results with respect to affects on organisms in the water at the site. No toxicity was observed for fathead minnows.

Results of the sediment toxicity testing indicate that survival of *H. azteca* at all sites was similar to the control, and only one sample, Lone Tree Creek at Jack Tone Road exhibited a significant difference in the growth of the organism.

Water chemistry – Chemical analysis on water from all sites indicated no detections of pesticides in any sample. Field parameters met water quality objectives; however pH at the Duck Creek @ Highway 4 site again exceeded water quality objectives at 8.6 (compared to 8.2 in the field) by the time the water reached the laboratory.

Dormant Season

Data are currently unavailable for the dormant season, but we have been informed that samples from the first and second storm events have generated significant toxicity when compared to laboratory controls. Water from four sites was found to be toxic to *Selenastrum*; Lone Tree Creek at Jack Tone Road, the agricultural drain at Grant Line Canal at Calpack Road, French Camp Slough at Airport Way and Terminous Tract at Highway 12. The number of algal cells from samples collected at all sites is provided below in Table 1. Because the two sites, the ag drain near Grant Line Canal at Calpack Road, and Terminous Tract at Highway 12, exhibited an order of magnitude decrease in algal growth, algal TIEs have been initiated for those sites. Although the other two sites were significantly different from the control, the reduction in algal growth was not sufficient to warrant algal TIEs at those sites.

In addition, water from Kellog Creek at Highway 4 exhibited significant toxicity to *Ceriodaphnia* (Table 2), and water from Lone Tree Creek at Jack Tone Road exhibited significant toxicity to fathead minnows (Table 3). Mortality for both tests was greater than 50% and TIEs are being initiated on both samples. A storm sample and a duplicate sample were collected from Potato Slough at Highway 12 (samples R1-PSAHT-016 and R1-PSAHT-017). The storm sample resulted in significant toxicity to *Ceriodaphnia* while the duplicate sample did not. We are retesting both samples to determine if the difference in survival is a function of the sample or laboratory handling. Samples were collected less than 5 minutes apart, but it is possible that a slightly different portion of the water column was collected during those two samples. If it appears that the survival differences are due to the sample itself, a TIE will be initiated and an additional sample collected. During a data QA check at the Pacific Ecorisk, Inc laboratory, an additional toxic event for Littlejohns Creek at Jack Tone Road was discovered. Water from the site collected February 16, 2005 has now been determined to be toxic to the fathead minnows.

We are collecting an additional sample from each site except for Potato Slough at Highway 12 (sample collection on 2/23/04) for new tests to determine if the toxicity is persistent. When the results of the new tests and the TIEs are available, we will provide you with those data. If the retest of the sample and duplicate from Potato Slough indicate similar results, a TIE will be initiated on the water from the sample and an additional sample will be collected from the site.

Communication reports were filed to report the exceedances.

Was Monitoring Sufficient to Characterize Water Quality

The Coalition believes that sampling conducted during the summer irrigation season was sufficient to characterize water quality in those watersheds in which samples were collected. We were unable to identify the constituent responsible for toxicity at the MRABR site. The TIE was initiated immediately after learning of the toxicity, but the cause of the toxicity disappeared from the original sample. Sampling is being expanded during the current dormant season and will continue through Phase I. The larger number of watersheds will allow us to characterize discharge over a wide variety of crops and locations in the Coalition region.

Did Data Meet Water Quality Objectives

Water Quality Objectives relevant to the Coalition are provided in Table 31. The water quality did not meet water quality objectives for four tests (Table 32).

Table 31. Relevant Water Quality Objectives for the SJCDWQ Coalition Region.

<i>Basin Plan Objectives</i>					
Analyte	Units	MDL	WQO	WQO Basis	Application
Temperature	°F	NA	narr.	<5°F increase above natural	All waters designated WARM or COLD
Dissolved Oxygen	mg/L	NA	5.0	Minimum	waters designated WARM
			7.0	Minimum	waters designated COLD
pH	-log[H ⁺]	NA	6.5-8.5	"appropriate averaging period" protective of beneficial uses	All waters
Conductivity	µmhos/cm	NA	900	NA	California secondary MCL
Color	CU	2	narr.	NA	All waters
Turbidity	NTU	0.1	narr.	NA	All waters
Total Dissolved Solids (TDS)	mg/L	6	500	NA	California secondary MCL
Total Suspended Solids (TSS)	mg/L	2	narr.	NA	All waters
<i>E. Coli</i> bacteria	MPN/100mL	2	126	5-sample geometric mean;	waters designated REC-1
			235	Single sample max	waters designated REC-1
<i>Other Objectives</i>					
Analyte	Units	MDL	WQO	WQO Basis	Application
Chlorpyrifos	µg/L	0.005	0.014	4-day average	All receiving waters (CDFG 2000)
			0.02	1-hour maximum	
Diazinon	µg/L	0.005	0.05	4-day average	All receiving waters (CDFG 2000)
			0.08	1-hour maximum	
<i>Monitored Analytes Without Objectives</i>					
Analyte	Units	MDL	WQO	WQO Basis	Application
Total Organic Carbon (TOC)	mg/L	0.3	none	NA	NA

Table 32. Exceedances of water quality objectives during 2004 irrigation sampling events.

	Sample	Water Quality Objective Exceedance
Event 1	DCAHF-027 LTCJR-037	pH* <i>E. coli</i>
Event 2	DCAHF-020 LTCJR-031	pH* <i>H. azteca</i> growth (sediment toxicity)

* Laboratory pH measurement, field pH met water quality objectives.

Where are Improvements Needed

As the Coalition increases the number of monitoring sites and increases the number of samples collected across the irrigation season, characterization of discharge from irrigated agriculture will improve. The Coalition feels improvement can be made in the communicating with the laboratories to allow the Coalition to understand when toxicity has occurred. Rapid communication will allow additional samples to be collected in a timely manner, and TIEs to be initiated if the toxicity triggers have been reached.

Detection limits for organophosphate pesticides were not low enough to detect the presence of diazinon and chlorpyrifos at levels required by the Regional Board. We informed the analytical laboratory that the detection limit needed to be lower and they complied with the request. The minimum detection limit study was submitted to the Regional Board last fall for review. The lower detection limits will be used starting with the 2005 dormant season sampling.

Additional goals for the laboratory analyses include improvements on surrogate recoveries and upper and lower recovery percentages in the matrix spike. DECA and TCMX surrogate recoveries were low at ~60% and ~50% respectively. Matrix spikes and matrix spike duplicates were generally high, but some recoveries were as low as 40%, and the RPD between surrogate matrix spikes and matrix spike duplicate samples for both surrogates and analytes occasionally exceeded 40% and in one case was almost 90% for permethrin during the first sampling event.

Types of Management Practices

Obtaining information on management practices was addressed in the most recent memo to the Regional Board and is provided below.

“A software program to compile BMPs of coalition members is in the process of being develop through a PRISM grant managed by the Coalition for Urban Rural

Environmental Stewardship. This software will be provided free to coalitions groups for use in their data management systems.

Timeline: The first draft of the software is expected to be completed by July 2005. The final software is expected to be available by September 2005 with the Coalition receiving the software shortly thereafter. Data entering from the above surveys will begin immediately with totals and data analysis completed by October 2005.”

Types of Pesticides

Obtaining information on pesticide use was addressed in the most recent memo to the Regional Board from the SJDWQC and is provided below.

“Should toxicity or exceedances be detected in monitoring performed by the Coalition or Regional Board, the Coalition will determine potential sources by examining Pesticide Use Reports and cropping of the upstream subwatershed that drains into that site.”

We have queried both counties in the Coalition region and have obtained, or will shortly obtain, pesticide use reports for the irrigation season starting July 2004, and also the dormant season from February through March 2005. We are currently working through the databases available, and will continue to work through the databases to characterize pesticide use in watersheds with water quality exceedances. We have preliminary data for Grant Line Canal @ Calpack Rd., which are presented to provide an example of what we will be able to develop for all watersheds. The data for Grant Line Canal needs to be grouped into products with the same active ingredient, and will be organized so that we can obtain pesticide use in the periods immediately preceding the sampling.

Actions taken to address water quality impacts identified

In two of the tests, the sample pH met water quality objectives in the field but failed by the time the water reached the analytical laboratory. A similar but smaller increase in sample pH was experienced by water delivered to the toxicity laboratory. The cause for the change in pH is unknown. Samples were placed on ice immediately after collection, and delivered to the laboratory. Icing the samples would presumably minimize biological and chemical activity that might affect pH. As SOPs were followed, it is unclear what improvements in sampling procedures can be made. Sediment toxicity was observed at one site, but no sediment TIEs are planned for the future. When the raw data are examined, the reduction in growth rate is consistent across replicate samples indicating that the result is not an artifact of a single anomalous replicate. If sediment toxicity persists, we will do sediment chemistry on the samples to determine if chemicals that bind to sediment are responsible for the toxicity.

In addition to modifying the testing procedures to be conducted next year, the SJCDWQC is involved in an additional effort to identify and eliminate the source of the toxicity. First, to identify the potential sources, we have requested all of the Pesticide Use Reports for all watersheds in the Coalition region. The County Agricultural Commissioners have been extremely helpful but their resources are stretched and the timetable for delivery is uncertain. We have separately requested the parcel level data from the county and those data are either available or forthcoming. Unfortunately, the PURs are compiled based on a township-range-section system, while parcel data are simply given APNs. Matching the files of parcel level data with the PURs is a very slow process. Also, the PURs contain tens of thousands of lines of information, even for small windows of time, slowing the search process further. As we work through those data, we will update the Regional Board on our progress.

Despite the fact that very little toxicity from water sampling last summer was found, the SJCDWQC initiated a series of outreach meetings in the Coalition region during the winter. The BMP workshops, located in Knightson and Lockeford, provided over 100 growers and crop advisors with updates on the monitoring results outlined above. Also presented was information on Best Management Practices to protect water quality. The goal of the meetings was to outline to growers and crop advisors the activities that the Coalition was responsible for performing as a follow up to monitoring of local waterways, such as identification of sources and promotion of management measures to correct the problem.

Communication Reports

San Joaquin County Resource Conservation District
3422 W. Hammer Lane, Suite A
Stockton, California 95219
209-472-7127 ext 125

September 24, 2004

William J. Marshall, Chief
Surface Water Runoff Division
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, #200
Sacramento, CA 95670-6114

Re: San Joaquin County & Delta Water Quality Coalition
Communication Report on Monitoring Results for August 2004

On August 24, 2004 water was collected at the SJCDWQC monitoring sites. Two sites, the Mokelumne River at Bruella Road (MRABR) and Littlejohns Creek at Jack Tone Road (LCAJR) exhibited significantly reduced algal growth during the *Selenastrum* tests. Neither of the samples was significantly different from the control for the *Ceriodaphnia* or the fathead minnow tests. The results of the *Selenastrum* test are as follows:

Laboratory Control: 1,647,250 cells/mL
MRABR: 1,301,750 cells/mL
LCAJR: 910,500 cells/mL

At the time the tests were performed, the laboratory was experiencing difficulties with their *Selenastrum* cultures. As a result, we retested the two samples using the original water collected on August 24. The retest of the water resulted in no reduced algal growth in either sample. No second sample was collected to determine persistence, as we were not sure that the original test results were correct. No algal TIE was initiated.

At this point, it is unclear if the initial test results for the algal growth at the two sites are correct or if the second results are correct. Generally, the constituents causing toxicity to algae (e.g., metals or herbicides) would not experience significant degradation in the sample container over a 5-day period, and therefore if the initial results were valid, we would have expected the retest to provide a similar reduction in growth, as did the original test. The results of the water quality analysis are not yet available but it is

doubtful that the pesticides for which we tested would have resulted in toxicity to algae. Consequently, we don't believe that those results will be of much help in interpreting the results of the tests. However, we will forward the water chemistry results for those two sites when they become available. At this point, we are assuming that the first results were positive as a result of the laboratory culture problems.

A second round of sampling was conducted on September 23, 2004 and those results should be available within the next week to 10 days.

Regards,

John B. Meek, Jr. President

Cc: Bill Croyle via email
Shakoora Azimi via email
Mike Johnson via email

San Joaquin County Resource Conservation District
3422 W. Hammer Lane, Suite A
Stockton, California 95219
209-472-7127 ext 125

February 22, 2005

William Croyle
Shakoor Azimi-Gaylon
Irrigated Lands Conditional Waiver Program
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, #200
Sacramento, CA 95670-6114

Re: San Joaquin County & Delta Water Quality Coalition
Communication Report on Monitoring Results for February 16, 2005

On February 16, 2005 water was collected at the SJCDWQC monitoring sites. Toxicity tests were completed on Monday February 21, 2005 and the results were communicated to us in full late on Tuesday February 22, 2005. Toxicity was found in water from samples collected at several sites and is being reported in this communication report.

Water from four sites was found to be toxic to *Selenastrum*; Lone Tree Creek at Jack Tone Road, the ag drain at Grant Line Canal at Calpack Road, French Camp Slough at Airport Way and Terminous Tract at Highway 12. The number of algal cells from samples collected at all sites is provided below in Table 1. Because the two sites, the ag drain near Grant Line Canal at Calpack Road, and Terminous Tract at Highway 12, exhibited an order of magnitude decrease in algal growth, algal TIEs have been initiated for those sites. Although the other two sites were significantly different from the control, the reduction in algal growth was not sufficient to warrant algal TIEs at those sites.

In addition, water from Kellog Creek at Highway 4 exhibited significant toxicity to *Ceriodaphnia* (Table 2), and water from Lone Tree Creek at Jack Tone Road exhibited significant toxicity to fathead minnows (Table 3). Mortality for both tests was greater than 50% and TIEs are being initiated on both samples. A storm sample and a duplicate sample were collected from Potato Slough at Highway 12 (samples R1-PSAHT-016 and R1-PSAHT-017). The storm sample resulted in significant toxicity to *Ceriodaphnia* while the duplicate sample did not. We are retesting both samples to determine if the difference in survival is a function of the sample or laboratory handling. Samples were collected less than 5 minutes apart, but it is possible that a slightly different portion of the water column was collected during those two samples. If it appears that the survival

differences are due to the sample itself, a TIE will be initiated and an additional sample collected.

As stated in the MRP, we are collecting an additional sample from each site except for Potato Slough at Highway 12 (sample collection on 2/23/04) for new tests to determine if the toxicity is persistent. When the results of the new tests and the TIEs are available, we will provide you with those data. If the retest of the sample and duplicate from Potato Slough indicate similar results, a TIE will be initiated on the water from the sample and an additional sample will be collected from the site.

Respectfully,

John B. Meek, Jr, Program Manager
Michael L. Johnson, Technical Program

Manager

Table 1.

Site ID	Cell Growth (cells/mL)	Toxicity (Y/N)
R1-SC-LWControl-01	1,801,000	N/A
R1-PSAHT-016	2,427,000	N
R1-PSAHT-017	2,364,000	N
R1-MRABR-023	1,537,000	N
R1-LTCJR-029	1,384,000	Y
R1-KCHWF-035	2,492,000	N
R1-TTGLR-041	2,718,000	N
R1-TTGUR-047	3,023,000	N
R1-GLCCR-053	128,750	Y
R1-MCABA-059	2,623,000	N
R1-LCAJR-065	1,730,000	N
R1-FCSAW-071	1,414,000	Y
R1-GLCAA-077	1,962,000	N
R1-TTHWT-083	333,500	Y

Table 2.

Site ID	Species	% Survival	Cell Growth (cells/mL)	Toxicity (Y/N)
R1-CD-LWControl-01	Ceriodaphnia dubia	95		N/A
R1-PSAHT-016	Ceriodaphnia dubia	30		Y
R1-PSAHT-017	Ceriodaphnia dubia	75		N
R1-MRABR-023	Ceriodaphnia dubia	100		N
R1-LTCJR-029	Ceriodaphnia dubia	90		N
R1-KCHWF-035	Ceriodaphnia dubia	0		Y
R1-TTGLR-041	Ceriodaphnia dubia	100		N
R1-TTGUR-047	Ceriodaphnia dubia	95		N
R1-GLCCR-053	Ceriodaphnia dubia	80		N
R1-MCABA-059	Ceriodaphnia dubia	90		N
R1-LCAJR-065	Ceriodaphnia dubia	95		N
R1-FCSAW-071	Ceriodaphnia dubia	100		N
R1-GLCAA-077	Ceriodaphnia dubia	95		N
R1-TTHWT-083	Ceriodaphnia dubia	95		N

Table 3.

Site ID	Species	% Survival	Cell Growth (cells/mL)	Toxicity (Y/N)
R1-PP-LWControl-01	Pimephales promelas	100		N/A
R1-PSAHT-016	Pimephales promelas	85		N
R1-PSAHT-017	Pimephales promelas	80		N
R1-MRABR-023	Pimephales promelas	95		N
R1-LTCJR-029	Pimephales promelas	0		Y
R1-KCHWF-035	Pimephales promelas	80		N
R1-TTGLR-041	Pimephales promelas	95		N
R1-TTGUR-047	Pimephales promelas	80		N
R1-GLCCR-053	Pimephales promelas	70		N
R1-MCABA-059	Pimephales promelas	80		N
R1-LCAJR-065	Pimephales promelas	70		N
R1-FCSAW-071	Pimephales promelas	75		N
R1-GLCAA-077	Pimephales promelas	95		N
R1-TTHWT-083	Pimephales promelas	85		N

San Joaquin County Resource Conservation District
3422 W. Hammer Lane, Suite A
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209-472-7127 ext 125

February 24, 2005

William Croyle
Shakoor Azimi-Gaylon
Irrigated Lands Conditional Waiver Program
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, #200
Sacramento, CA 95670-6114

Re: San Joaquin County & Delta Water Quality Coalition
Communication Report on Monitoring Results for February 16, 2005

In the communication report of February 22, 2005, we reported on toxicity from five sites within the coalition region. During a data QA check at the Pacific Ecorisk, Inc laboratory, an additional problem was discovered. We are reporting an additional toxic event for Littlejohns Creek at Jack Tone Road. Water from the site collected February 16, 2005 has now been determined to be toxic to the fathead minnows. An amended Table 1 with *Pimephales* results is provided below.

The problem arose with the software used by the laboratory to perform the statistical analyses on the data. With two replicates for the control and the sample, the assumption of normality needed to perform a parametric t-test for differences between means is violated. The software then uses a nonparametric Mann-Whitney U test, which is a test of the equivalence of the cumulative distribution functions of the two samples and uses the rank order of the results as the basis for calculating the test statistic. Because of the manner in which the test statistic is calculated, a sample size of 2 (replicates in each group) for each test group guarantees that the power of the analysis is so low that there can never be any significant differences between the two cumulative distribution functions. However, examining the data revealed that there was 0% survival in the sample and 100% survival in the control. Despite the lack of statistical significance, it is obvious that a significant difference exists between the sample and the control. Unfortunately, due to the violation of the assumptions of the parametric tests that renders them inappropriate for the analysis, and the lack of replication that compromises the power of the nonparametric test, there is no ready solution to the problem. Consequently, we have decided to ignore the statistical procedure and declare the sample to be toxic to the fathead minnows.

As stated in the MRP, we will collect an additional sample and retest the water from the site to determine persistence. We have initiated a TIE with the original sample. When the results of the new tests and the TIEs are available, we will provide you with those data.

Respectfully,

John B. Meek, Jr. Program Manager
Michael L. Johnson, Technical Program

Manager

Table 1.

Site ID	Species	% Survival	Cell Growth (cells/mL)	Toxicity (Y/N)
R1-PP-LWControl-01	<i>Pimephales promelas</i>	100		N/A
R1-PSAHT-016	<i>Pimephales promelas</i>	85		N
R1-PSAHT-017	<i>Pimephales promelas</i>	80		N
R1-MRABR-023	<i>Pimephales promelas</i>	95		N
R1-LTCJR-029	<i>Pimephales promelas</i>	0		Y
<i>R1-KCHWF-035</i>	<i>Pimephales promelas</i>	80		N
R1-TTGLR-041	<i>Pimephales promelas</i>	95		N
R1-TTGUR-047	<i>Pimephales promelas</i>	80		N
R1-GLCCR-053	<i>Pimephales promelas</i>	70		N
R1-MCABA-059	<i>Pimephales promelas</i>	80		N
R1-LCAJR-065	<i>Pimephales promelas</i>	70		Y
R1-FCSAW-071	<i>Pimephales promelas</i>	75		N
R1-GLCAA-077	<i>Pimephales promelas</i>	95		N
R1-TTHWT-083	<i>Pimephales promelas</i>	85		N

Transmittal letter

San Joaquin County Resource Conservation District
3422 W. Hammer Lane, Suite A
Stockton, California 95219
209-472-7127 ext 125

April 1, 2005

William Croyle
Irrigated Lands Program
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive #200
Sacramento, CA 95670-6114

Dear Bill,

During the 2004 irrigation season, sampling was conducted on two dates at six sites (each sampling date). The following waiver violations were discovered during the 2004 irrigation season.

Event 1 (August 24, 2004)

Two sites, Mokelumne River at Bruella Road and Little Johns Creek at Jack Tone Road, exhibited significantly reduced algae growth compared to the laboratory controls. The laboratory was experiencing difficulties with their algae culture and the water was retested on September 8, 2004. Both samples showed no toxicity during the retest and it was concluded that the results from the original test were due to the algal culture problems at the laboratory. No toxicity was observed in the *Ceriodaphnia* or fathead minnow tests with the survival in all samples equaling or exceeding the survival of the laboratory controls.

Chemical analysis on water from all sites indicated no detections of pesticides in any sample. Field parameters met water quality objectives, however pH at the Duck Creek @ Highway 4 site was 8.8 (compared to 7.54 in the field) by the time the water reached the laboratory. Levels of E. coli were elevated in samples collected at Lone Tree Creek at Jack Tone Road (500 MPN/100 ml).

Event 2 (September 23, 2004)

No toxicity was observed at any site during algae testing. One site, Mokelumne River at Bruella Road exhibited significant toxicity to *Ceriodaphnia* and a second sample was collected to determine if the toxicity was persistent. In addition, a Toxicity Identification Evaluation (TIE) was performed to determine the cause of the toxicity. There was no toxicity observed in the follow-up sample indicating that the toxicity was not persistent. By the time the TIE was performed, a retest of the sample indicated that no toxicity was present and the results of the TIE were inconclusive. Consequently, no cause could be assigned to the toxicity seen at the site. The lack of persistence makes it difficult to interpret the results with respect to affects on organisms in the water at the site. No toxicity was observed for fathead minnows.

Results of the sediment toxicity testing indicate that survival of *H. azteca* at all sites was similar to the control, and only one sample, Lone Tree Creek at Jack Tone Road exhibited a significant difference in the growth of the organism.

Chemical analysis on water from all sites indicated no detections of pesticides in any sample. Field parameters met water quality objectives; however pH at the Duck Creek @ Highway 4 site again exceeded water quality objectives at 8.6 (compared to 8.2 in the field) by the time the water reached the laboratory.

Several toxicity exceedances have been discovered during the dormant season storm sampling. While we have unofficial data sufficient to file a Communication Report and initiate TIEs, we have not received data from the labs.

Follow-up actions

Although listed as exceedances of water quality objectives, the elevated pH measurements in the lab relative to the field calls into question the relevance of the laboratory pH reading. One site, Mokelumne River at Bruella Road exhibited significant toxicity to *Ceriodaphnia* and a second sample was collected to determine if the toxicity was persistent. In addition, a Toxicity Identification Evaluation (TIE) was performed to determine the cause of the toxicity. There was no toxicity observed in the follow-up sample indicating that the toxicity was not persistent. By the time the TIE was performed, a retest of the sample indicated that no toxicity was present and the results of the TIE were inconclusive. Consequently, no cause could be assigned to the toxicity seen at the site. The lack of persistence makes it difficult to interpret the results with respect to effects on organisms in the water at the site.

Because the cause of the toxicity is currently unknown for the Mokelumne River site, the SJCD Coalition will take the following steps: 1) using 2004 PURs, identify and quantify the chemicals that could be potential sources of toxicity to *Ceriodaphnia*, 2) determine through testing if toxicity is present in 2005, 3) perform TIEs (if toxicity trigger is exceeded) to evaluate the potential causes of toxicity including metals, 4) increase the list of chemicals tested during water chemistry analyses to include those that could be causes of toxicity to the species, 5) obtain 2005 PURs for the watershed, and 6) use the results of the toxicity tests, TIEs (if performed), water chemistry, and PUR data on location of applications in a weight-of-evidence approach to identify cause(s) and potential source(s). If sediment toxicity persists for the Lone Tree Creek site, we will initiate sediment chemistry to determine if sediment bound pesticides could be the cause of the toxicity.

Expanded sampling for Phase I and Phase II

Following discussions with Regional Board staff, the sample sites were reexamined and an expanded set of sites were proposed for 2005. The proposed sites included core sites at which sampling would continue throughout the life of the monitoring program, and a series of rotating sites that would be sampled for two years.

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

Michael L. Johnson, Ph.D.

Date

Conclusions/Recommendations

All conclusions and recommendations are found in the text of the Annual Monitoring Report.

Appendix I. Raw Data

Raw data were not provided by the laboratory and will be delivered as soon as they arrive.

ESJRWC FIELD SAMPLING DATA LOG SHEET: EVENT 02
Ag Waiver Program

Station: Duck Slough at Gurr Road

Date: 8.31.09

N 37°12.85' W 120°33.637'
 Latitude 37.2077 Longitude 120.5781

Weather: Sunny clear

Personnel: MM

Flow: 0.5 mph

Estd. Midchannel Depth: 1ft
 Elevation 77.1ft
 Accuracy 32.6ft

Stage: NA

Field Meter Data

Temp. °C	EC, µS/cm	DO, mg/L	pH
21.43	462	9.30	7.85

Samples Collected

Sample ID	Time	Sample Depth	Notes*
✓ 02-DSAGR-015	1200	1ft	BG
✓ 02-DSAGR-016	1201	1ft	ED
✓ 02-DSAGR-017	1202	1ft	BG
✓ 02-DSAGR-018	1203	1ft	BG
✓ 02-DSAGR-019	1204	1ft	BG
✓ 02-DSAGR-020	1205	1ft	BG
✓ 02-DSAGR-021	1206	1ft	BG

Additional Notes or Comments:

ED - Ekman Dredge - Sed sample

large amounts of organic debris

when sampling sediment

* SG = Surface Grab, direct to container; BG = Bucket Grab

ESJRW FIELD SAMPLING DATA LOG SHEET: EVENT 02
Ag Waiver Program

Station: Dutchman's Creek at Gurr Road

Date: 8-31-04

N 37° 11.706'
 Latitude 37.1944

W 120° 33.672'
 Longitude 120.5784

Weather: clear, sunny

Personnel: MM

Flow: 0.5 mph

Estd. Midchannel Depth: 1ft

Stage: NM

Elevation 99.3ft
 Accuracy 20.3ft

Field Meter Data

<u>Temp, °C</u>	<u>EC, µS/cm</u>	<u>DO, mg/L</u>	<u>pH</u>
21.32	321	9.13	8.21

Samples Collected

<u>Sample ID</u>	<u>Time</u>	<u>Sample Depth</u>	<u>Notes*</u>
✓ 02-DCAGR-MS/MSD	826	1ft	BG
✓ 02-DCAGR-MS/MSD	827	1ft	BG
✓ 02-DCAGR-022	828	1ft	BG
✓ 02-DCAGR-023	829	1ft	ED
✓ 02-DCAGR-024	830	1ft	ED
✓ 02-DCAGR-025	831	1ft	BG
✓ 02-DCAGR-026	832	1ft	BG
✓ 02-DCAGR-027	833	1ft	BG
✓ 02-DCAGR-028	834	1ft	BG
✓ 02-DCAGR-029	835	1ft	BG

Additional Notes or Comments:

ED = Ekman Dredge - sed sample

VSI 556 mps meter calibrated for pH, D.O., and
 Conductivity. All standards within correct parameters.

MM

* SG = Surface Grab, direct to container; BG = Bucket Grab

ESJRWQC FIELD SAMPLING DATA LOG SHEET: EVENT 02 (Re-Sample)
Ag Waiver Program

Station: Merced River at Santa Fe Drive

Date: 9/7/04 ~105°C

Personnel: S. CLARK

Weather: SUNNY / BREEZY / HOT

Est. Midchannel Depth: 2'

Flow: 1.25 MPH

GPS Coordinates: Lat: 37.2077
 Long: 120.5781

Stage: UNKNOWN

Field Meter Data

Temp (°C)	EC (µS/cm)	D.O. (mg/L)	pH	NOTES
28.9 28.9250	40	9.7	7.59	

Samples Collected

Sample ID	Time	Sample Depth	NOTES
02-MRSFD-030	1545	~1'	DTC

Additional Notes or Comments:

RESAMPLING AS FOLLOW-UP FOR TOXIC SAMPLES
 COLLECTED 8/31/04.

ESJRWCFIELD SAMPLING DATA LOG SHEET: EVENT 03
Ag Walver Program

Station: August Road Drain upstream of
Crows Landing Bridge (Hogin Road)

Date: 29 Sep 2004

Latitude N 37° 25.870' Longitude W 120° 59.702'
 37.4311 120.9937

Weather: Sunny / Clear

Personnel: MM

Flow: AM GMPH 1.5 mph

Estd. Midchannel Depth: 12 inches
 Elevation 220.7 ft
 Accuracy ± 2.16 ft

Stage: NA

Field Meter Data

<u>Temp, °C</u>	<u>EC, µS/cm</u>	<u>DO, mg/L</u>	<u>pH</u>
21.24	1022	15.85	8.26

Samples Collected

<u>Sample ID</u>	<u>Time</u>	<u>Sample Depth</u>	<u>Notes*</u>
03-ARDCL-001	1525	12 inches	BG
03-ARDCL-002	1526	12 inches	BG
03-ARDCL-003	1527	12 inches	BG
03-ARDCL-004	1528	12 inches	BG
03-ARDCL-005	1529	12 inches	BG
03-ARDCL-006	1530	12 inches	BG

Additional Notes or Comments:

on site 1515
 off site 1630

* SG = Surface Grab, direct to container; BG = Bucket Grab

ESJRWK FIELD SAMPLING DATA LOG SHEET: EVENT 03
Ag Waiver Program

Station: Merced River at Santa Fe Drive

Date: 29 Sep 2004

N 37°25.628'
 Latitude 37.4271

W 120°40.395'
 Longitude 120.6722

Weather: sunny / clear

Personnel: MM

Flow: 0.65 mph

Estd. Midchannel Depth: 20 inches

Stage: NA

Elevation 142.1 ft

Field Meter Data Accuracy 141 ft

<u>Temp, °C</u>	<u>EC, µS/cm</u>	<u>DO, mg/L</u>	<u>pH</u>
21.00	40	8.40	7.83

Samples Collected

<u>Sample ID</u>	<u>Time</u>	<u>Sample Depth</u>	<u>Notes*</u>
03-MRSFD-MS/MSD	1340	MM 1340 20 inches	SG
03-MRSFD-MS/MSD	1341	MM 1341 20 inches	SG
03-MRSFD-007	1342	MM 1342 20 inches	SG
03-MRSFD-008	1343	MM 1343 20 inches	SG
03-MRSFD-009	1344	MM 1344 20 inches	SG
03-MRSFD-010	1345	MM 1345 20 inches	SG
03-MRSFD-011	1346	MM 1346 20 inches	SG
03-MRSFD-012	1347	MM 1347 20 inches	SG

Additional Notes or Comments:

on site ^{MM} to 1255

* SG = Surface Grab, direct to container; BG = Bucket Grab

ESJRW FIELD SAMPLING DATA LOG SHEET: EVENT 03
Ag Waiver Program

Station: Duck Slough at Gurr Road

Date: 29 Sep 2004

N 37° 12.854 W 120° 33.641
 Latitude 37.2077 Longitude 120.5781

Weather: Sunny/clear

Personnel: MM

Flow: 0 Mph

Estd. Midchannel Depth: 12 inches
 Elevation 106.4 ft
 Accuracy 14.9 ft

Stage: NA

Field Meter Data

<u>Temp, °C</u>	<u>EC, µS/cm</u>	<u>DO, mg/L</u>	<u>pH</u>
15.55	701	8.76	7.78

Samples Collected

<u>Sample ID</u>	<u>Time</u>	<u>Sample Depth</u>	<u>Notes*</u>
<input type="checkbox"/> 03-DSAGR-013	1000	12 inches	BG
<input type="checkbox"/> 03-DSAGR-014	1001	12 inches	BG
<input type="checkbox"/> 03-DSAGR-015	1002	12 inches	BG
<input type="checkbox"/> 03-DSAGR-016	1003	12 inches	BG
<input type="checkbox"/> 03-DSAGR-017	1004	12 inches	BG
<input type="checkbox"/> 03-DSAGR-018	1005	12 inches	BG

Additional Notes or Comments:

Performed split sampling with UC Davis team
 on site 945
 off site 1020

* SG = Surface Grab, direct to container; BG = Bucket Grab

ESJRW FIELD SAMPLING DATA LOG SHEET: EVENT 03
Ag Waiver Program

Station: Dutchman's Creek at Gurr Road

Date: 29 Sep 2004

N 37°11.702'

W 120°33.677'

Latitude 37.1944

Longitude 120.5784

Weather: Sunny, Clear

Personnel: MM

Flow: 0.0 mph

Estd. Midchannel Depth: 18 inches

Stage: NA

Elevation 169.3 ft
 Accuracy 33.3 ft

Field Meter Data

<u>Temp, °C</u>	<u>EC, µS/cm</u>	<u>DO, mg/L</u>	<u>pH</u>
18.63	462	6.7	8.23

Samples Collected

<u>Sample ID</u>	<u>Time</u>	<u>Sample Depth</u>	<u>Notes*</u>
03-DCAGR-019	855	18 inches	BG
03-DCAGR-020	856	18 inches	BG
03-DCAGR-021	857	18 inches	BG
03-DCAGR-022	858	18 inches	BG
03-DCAGR-023	859	18 inches	BG
03-DCAGR-024	900	18 inches	BG

Additional Notes or Comments:

On site 830

off site 930

YSI multi-probe (556 MPS) calibrated for
 D.O., conductivity, & pH. All standards
 within acceptable parameters MM

* SG = Surface Grab, direct to container; BG = Bucket Grab

Field Quality Control Samples

Field measurements were made as outlined in Table 9a and the results are reported in Table 9b.

Table 9a. Field parameters and instruments used to collect measurements.

Parameter	Instrument
Dissolved oxygen	YSI Model 57 Oxygen Meter
Temperature	VWR Scientific Traceable Digital Thermometer (Cat. #61220416)
pH	Orion Model 230A pH Meter
Electrical Conductivity	Orion Model 130 Conductivity Meter

Table 9b. East San Joaquin Water Quality Coalition field measurements for the 2004 irrigation season.

Coalition	Season	StationCode	SampleDate	SampleTime	Discharge	Oxygen, Dissolved	pH	Specific Conductivity	Temperature
ESJWQC	Irrigation1	535XARDCL	31/Jul/2004	16:05	0	15.6	8.48	2082	30.5
ESJWQC	Irrigation1	535XDCAGR	31/Jul/2004	10:50	0	6.85	7.77	362	23.3
ESJWQC	Irrigation1	535XDSAGR	31/Jul/2004	11:50	0.24	7.82	7.75	364	25.5
ESJWQC	Irrigation1	535XMRSFD	31/Jul/2004	14:40	1	7.44	7.44	54	27.6
ESJWQC	Irrigation2	535XARDCL	31/Aug/2004	17:05	1	11.26	8.12	1093	27.11
ESJWQC	Irrigation2	535XDCAGR	31/Aug/2004	8:25	0.5	9.13	8.21	321	21.32
ESJWQC	Irrigation2	535XDSAGR	31/Aug/2004	12:00	0.5	9.3	7.85	462	21.43
ESJWQC	Irrigation2	535XMRSFD	31/Aug/2004	15:00	2	9.51	8.07	48	25.92
ESJWQC	Irrigation2	535XMRSFD	07/Sep/2004	15:45	1.25	9.7	7.59	40	25
ESJWQC	Irrigation3	535XARDCL	29/Sep/2004	15:25	1.5	15.85	8.26	1022	21.24
ESJWQC	Irrigation3	535XDCAGR	29/Sep/2004	8:55	0	6.7	8.23	462	18.63
ESJWQC	Irrigation3	535XDSAGR	29/Sep/2004	10:00	0	8.76	7.78	701	15.55
ESJWQC	Irrigation3	535XMRSFD	29/Sep/2004	13:40	0.65	8.4	7.83	40	21

Analytical Methods

Analytical Laboratories

The laboratories conducting the analyses for the ESJWQC include: 1) Pacific Ecorisk, Inc. which is responsible for the field sampling, water column and sediment toxicity testing, 2) APPL, Inc. which is responsible for pesticide analysis, and 3) BSK Laboratories, Inc which is responsible for color, turbidity, TDS, TOC, and *E. coli*. All constituents analyzed, the methods used, and the reporting limits are provided in Table 10.

Table 10. Constituents monitored by the EJCWQC during the three irrigation season events and the two dormant season events, Analytical Methods and Project Reporting Limits. Sediment sampling was conducted only once during the irrigation season.

Constituent	Fractions	Methods # ⁽¹⁾	RL ⁽²⁾
Physical Parameters			
Flow	Field Measurement		
pH	Field Measurement		
Electrical conductivity (EC)	Field Measurement		
Dissolved Oxygen (DO)	Field Measurement		
Temperature	Field Measurement		
Color	None	SM 2120B Mod	5.0 color units
Turbidity	Total	SM 2130B	1.0 NTU
Total Dissolved Solids (TDS)	Total	SM 2540C	5.0 mg/L
Drinking Water			
<i>Escherichia coli</i> (<i>E. coli</i>) – if necessary	None	SM 9221B	2 MPN/100 ml
Total Organic Carbon (TOC)	Total	SM 5310C	5.0 mg/L
Toxicity Test			
Water Column Toxicity		(3) & (4)	
Sediment Toxicity		(5)	
Pesticides			
Organophosphates (Ops)			
Chlorpyrifos		EPA Method 8141a	0.01 µg/L
Diazinon		EPA Method 8141a	0.01 µg/L
Pyrethroids			
Cypermethrin		EPA Method 1660 Mod	0.05 µg/L
Lambda cyhalothrin		EPA Method 1660 Mod	0.02 µg/L
Esfenvalerate		EPA Method 1660 Mod	0.01 µg/L
Permethrin		EPA Method 1660 Mod	0.02 µg/L

- (1) Standard Methods (SM) or EPA Method Number.
- (2) Reporting Limit for Project, based on detection limits achievable by analyzing laboratory.
- (3) Methods for measuring the acute toxicity of effluents and receiving waters to freshwater and marine organisms. U.S. Environmental Protection Agency (USEPA), Office of Water. EPA-821-R-02-012.
- (4) Short Term Methods for estimating the chronic toxicity of effluents and receiving waters to freshwater organisms. U.S. Environmental Protection Agency (USEPA), Office of Water. EPA-821-R-02-013.
- (5) Methods for measuring the toxicity and Bioaccumulation of sediment-associated contaminants with freshwater organisms. U.S. Environmental Protection Agency (USEPA), Office of Research and Development. EPA 600/R-99/064.

Chain of Custody Forms and Data



Pacific EcoRisk

ENVIRONMENTAL CONSULTING & TESTING

835 Arnold Drive, Suite 104, Martinez, CA 94553
(925) 313-8080 FAX (925) 313-8089

BSK CHAIN-OF

2004080001 08/02/2004
PACIFIC ECO TAT: Standard
82002



Client Name: Pacific EcoRisk				REQUESTED ANALYSIS										
Client Address: 835 Arnold Drive, Suite 104 Martinez, CA 94553														
Sampled By: PER														
Phone: (925) 313-8080														
FAX: (925) 313-8089														
Project Manager: Stephen Clark														
Project Name: East San Joaquin River Watershed Coalition														
PO Number:														
Client Sample ID	Sample Date	Sample Time	Sample Matrix*	Container		Color (SM2120 B Mod)	Turbidity (EPA 180.1)	TDS (EPA 180.1)	TOC (SM 5310 C)	E. coli (SM 9221 B)				
				Number	Type									
1 01-RSSJR-004 MM			FW	1	1-L HDPE	x	x	x					47	512
2 01-ARDCL-010	7/31/04	1608	FW	1	1-L HDPE	x	x	x						13
3 01-MRSFD-016	7/31/04	1443	FW	1	1-L HDPE	x	x	x						14
4 01-DSAGR-026 ⁰²⁷	7/31/04	1206	FW	1	1-L HDPE	x	x	x						15
5 01-DSAGR-028 ⁰²⁸	7/31/04	1207	FW	1	1-L HDPE	x	x	x						16
6 01-DSAGR-029 ⁰²⁹	7/31/04	1208	FW	1	1-L HDPE	x	x	x						17
7 01-DCAGR-041 ⁰³⁹	7/31/04	1053	FW	1	1-L HDPE	x	x	x						
8 01-ASATA-046 MM			FW	1	1-L HDPE	x	x	x						
Correct Containers: Yes No				RELIQUISHED BY										
Sample Temperature: Ambient Cold Warm				Signature: <i>Michael McElroy</i>										
Sample Preservative: Yes No				Print: Michael McElroy										
Turnaround Time: STD Specify:				Organization: PER										
Comments: 027 01-DSAGR-026 = Field Blank 01-DSAGR-029 = Field Duplicate 028				DATE: 7/31/04										
				TIME: 1622										
				RECEIVED BY										
				Signature: <i>Sophia Kemp</i>										
				Print: Sophia Kemp										
				Organization: BSK labs										
				DATE: 07/31/04										
				TIME: 1755										

*MATRIX CODES: (SED = Sediment); (FW = Freshwater); (WW = Wastewater); (STRMW = Stormwater)

of your pickup @ FoodLAB @ 11:30 AM 8/1/04
Delivered to BSK Lab - 8/2/04
Administrative Record
Page 8337

Sandy Brown 8/2/04 045

Date Received 8/2/04

Pre

82002



Section 1

Shipping: Walk In CAO SJVC BSK UPS GSO U.S. Mail Fed Exp. Airborne

Has chilling process begun? Y N Samples Received: Chilled to Touch / Ambient / On Ice

Section 2

No. Coolers/Ice Chests: _____ Temperature(s): _____

Was Temperature In Range: Y N Received On Ice: Wet Blue

Describe type of packing materials: Bubble Wrap

Were ice chest custody seals present? Y N Intact: Y N SB

Section 3

	Completed			Completed	
	Yes	No		Yes	No
Was COC Received	<input checked="" type="checkbox"/>		Analysis Requested	<input checked="" type="checkbox"/>	
Date Sampled	<input checked="" type="checkbox"/>		Any hold times less than 72hrs	<input checked="" type="checkbox"/>	
Time Sampled	<input checked="" type="checkbox"/>		Client Name	<input checked="" type="checkbox"/>	
Sample Identification	<input checked="" type="checkbox"/>		Address	<input checked="" type="checkbox"/>	
Special Storage/Handling Ins.		<input checked="" type="checkbox"/>	Telephone #	<input checked="" type="checkbox"/>	

Section 4

	Yes	No
Did all bottles arrive unbroken and intact?:	<input checked="" type="checkbox"/>	
were bottle custody seals present?		<input checked="" type="checkbox"/>
Were bottle custody seals intact?		<input checked="" type="checkbox"/>
Did all bottle labels agree with COC?:	<input checked="" type="checkbox"/>	
Were correct containers used for the tests requested?:	<input checked="" type="checkbox"/>	
Were correct preservations used for the tests requested?:	<input checked="" type="checkbox"/>	
Was a sufficient amount of sample sent for tests indicated?:	<input checked="" type="checkbox"/>	
Were bubbles present in VOA Vials?:		<input checked="" type="checkbox"/>
Were Ascorbic Acid Bottles received with the VOAs		<input checked="" type="checkbox"/>

Section 5

Samples Split / Preserved at lab?: Y N By: _____ Date: _____

Was Project Manager notified of discrepancies: Y / N N/A Notified By: _____

Explanations / Comments

Report Comment Entered: _____

F://SHARE/QC/DOCCONTROL/FORMS/SMPINTG04 labeled by: [Signature]

checked by: [Signature]



Pacific EcoRisk

ENVIRONMENTAL CONSULTING & TESTING

835 Arnold Drive, Suite 104, Martinez, CA 94553
(925) 313-8060 FAX (925) 313-8089

2004090111 09/01/2004
PACIFIC ECO TAT: Standard
91113

BSK CHAIN-OF-C



Client Name: Pacific EcoRisk				REQUESTED ANALYSIS												
Client Address: 835 Arnold Drive, Suite 104 Martinez, CA 94553																
Sampled By:																
Phone: (925) 313-8080																
FAX: (925) 313-8089																
Project Manager: Stephen Clark																
Project Name: East San Joaquin River Watershed Coalition																
PO Number:																
Client Sample ID	Sample Date	Sample Time	Sample Matrix*	Container		Color (SM2120 B Mod)	Turbidity (EPA 180.1)	TDS (EPA 160.1)	TOC (SM 5310 C)	E. coli (SM 9221 B)						
				Number	Type											
02-ARDCL-005	8-31-04	1709	FW	1	1-L HDPE	x	x	x								
02-MRSFD-012	8-31-04	1504	FW	1	1-L HDPE	x	x	x								
02-DSAGR-019	8-31-04	1204	FW	1	1-L HDPE	x	x	x								
02-DCAGR-027	8-31-04	833	FW	1	1-L HDPE	x	x	x								
Correct Containers:				Yes	No	RELIQUISHED BY										
Sample Temperature:				Ambient	Cold	Warm	Signature: <i>Michael McElroy</i>									
Sample Preservative:				Yes	No	Print: Michael McElroy										
Turnaround Time:				STD	Specify:	Organization: PER										
Comments:				DATE: 8-31-04 TIME: 1713												
				RECEIVED BY												
				Signature: <i>Barbara Hernandez</i>												
				Print: Barbara Hernandez												
				Organization: BSK-R												
				DATE: 8/31/04 TIME: 1850												

*MATRIX CODES: (SED = Sediment); (FW = Freshwater); (WW = Wastewater); (STRMW = Stormwater)

Sample Integrity

Pg. 1 of 2

CL 2004090111 09/01/2004

PACIFIC ECO TAT: Standard
91113

Date Received 9-1-04



Section 1

Shipping: Walk In CAO SJVC BSK UPS GSO U.S. Mail Fed Exp. Airborne

Has chilling process begun? Y N Samples Received: Chilled to Touch / Ambient / On Ice

Section 2

No. Coolers/Ice Chests: _____ Temperature(s): _____

Was Temperature In Range: ~~Y~~ N Received On Ice: Wet Blue

Describe type of packing materials: _____ Bubble Wrap

Were ice chest custody seals present? Y N Intact: Y N

Section 3	Completed			Completed	
	Yes	No		Yes	No
Was COC Received	<input checked="" type="checkbox"/>		Analysis Requested	<input checked="" type="checkbox"/>	
Date Sampled	<input checked="" type="checkbox"/>		Any hold times less than 72hrs		<input checked="" type="checkbox"/>
Time Sampled	<input checked="" type="checkbox"/>		Client Name	<input checked="" type="checkbox"/>	
Sample Identification	<input checked="" type="checkbox"/>		Address	<input checked="" type="checkbox"/>	
Special Storage/Handling Ins.		<input checked="" type="checkbox"/>	Telephone #	<input checked="" type="checkbox"/>	

Section 4	Yes	No
Did all bottles arrive unbroken and intact?:	<input checked="" type="checkbox"/>	
Were bottle custody seals present?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Were bottle custody seals intact?		<input checked="" type="checkbox"/>
Did all bottle labels agree with COC?:	<input checked="" type="checkbox"/>	
Were correct containers used for the tests requested?:	<input checked="" type="checkbox"/>	
Were correct preservations used for the tests requested?:	<input checked="" type="checkbox"/>	
Was a sufficient amount of sample sent for tests indicated?:	<input checked="" type="checkbox"/>	
Were bubbles present in VOA Vials?:	<input checked="" type="checkbox"/>	
Were Ascorbic Acid Bottles received with the VOAs	<input checked="" type="checkbox"/>	

Section 5

Samples Split / Preserved at lab?: Y N By: _____ Date: _____

Was Project Manager notified of discrepancies: Y / N N/A Notified By: _____

Explanations / Comments

Report Comment Entered: _____

F:/SHARE/QC/DOCCONTROL/FORMS/SMPINTG04 labeled by: CT checked by: BA



Pacific EcoRisk

ENVIRONMENTAL CONSULTING & TESTING

835 Arnold Drive, Suite 104, Martinez, CA 94553
(925) 313-8080 FAX (925) 313-8089

2004092146

09/30/2004

BSK CH

PACIFIC ECO

TAT: Standard

930035

IRD



30035

Client Name:		Pacific EcoRisk				REQUESTED ANALYSIS											
Client Address:		835 Arnold Drive, Suite 104 Martinez, CA 94553				Color (SM2120 B Mod)	Turbidity (EPA 180.1)	TDS (EPA 160.1)	TOC (SM 5310 C)	E. coli (SM 9221 B)							
Sampled By:																	
Phone:		(925) 313-8080															
FAX:		(925) 313-8089															
Project Manager:		Stephen Clark															
Project Name:		East San Joaquin River Watershed Coalition															
PO Number:																	
Client Sample ID		Sample Date	Sample Time	Sample Matrix*	Container Number								Container Type				
1	03-ARDCL-004	9/29/04	1528	FW	1	1-L HDPE	x	x	x		502481						
2	03-MRSFD-010	9/29/04	1343	FW	1	1-L HDPE	x	x	x		82						
3	03-DSAGR-016	9/29/04	1003	FW	1	1-L HDPE	x	x	x		83						
4	03-DCAGR-022	9/29/04	858	FW	1	1-L HDPE	x	x	x		84						
5																	
6	03-ARDCL-003	9/29/04	1527	FW	1	250-mL amber				x	502485						
7	03-MRSFD-009	9/29/04	1346	FW	1	250-mL amber				x	86						
8	03-DSAGR-015	9/29/04	1002	FW	1	250-mL amber				x	87						
9	03-DCAGR-021	9/29/04	757	FW	1	250-mL amber				x	88						
10																	
11	03-MRSFD-MS/MSD	9/29/04	1341	FW	1	250-mL amber				x							
Correct Containers:		Yes	No			RELIQUISHED BY											
Sample Temperature:		Ambient	Cold	Warm		Signature: <i>Mike McElroy</i>											
Sample Preservative:		Yes	No			Print: Mike McElroy											
Turnaround Time:		STD	Specify:		Organization: PER												
Comments: 03-MRSFD-MS/MSD = For BSK Internal Matrix Spike/Matrix Spike Duplicate (do not invoice)						DATE: 9-29-04						TIME: 1532					
						RECEIVED BY						Signature: <i>Sandy Bacon</i>					
												Print: Sandy Bacon					
												Organization:					
						DATE: 9/30/04						TIME: 9:55					

*MATRIX CODES: (SED = Sediment); (FW = Freshwater); (WW = Wastewater); (STRMW = Stormwater)

Paul [unclear] 9/30/04 0935

Sample Integrity

Pg. 1 of 2

2004092146
PACIFIC ECO
930035

09/30/2004
TAT: Standard

Date Received

Section 1

Shipping: Walk In CAO SJVC BSK UPS GSO U.S. Mail Fed Exp. Airborne

Has chilling process begun? Y N Samples Received: Chilled to Touch / Ambient / On Ice

Section 2

No. Coolers/Ice Chests: _____ Temperature(s): _____

Was Temperature In Range: Y N Received On Ice: Wet Blue

Describe type of packing materials: Bubble Wrap

Were ice chest custody seals present? Y N Intact: Y N

Section 3

	Completed			Completed	
	Yes	No		Yes	No
Was COC Received	-		Analysis Requested	-	
Date Sampled	-		Any hold times less than 72hrs	-	48hrs
Time Sampled	-		Client Name	-	
Sample Identification	-		Address	-	
Special Storage/Handling Ins.		-	Telephone #	-	

Section 4

	Yes	No
Did all bottles arrive unbroken and intact?:	-	
Were bottle custody seals present?		-
Were bottle custody seals intact?		-
Did all bottle labels agree with COC?:	-	
Were correct containers used for the tests requested?:	-	
Were correct preservations used for the tests requested?:	-	
Was a sufficient amount of sample sent for tests indicated?:	-	
Were bubbles present in VOA Vials?:		
Were Ascorbic Acid Bottles received with the VOAs		-

Section 5

Samples Split / Preserved at lab?: Y N By: _____ Date: _____

Was Project Manager notified of discrepancies: Y / N N/A Notified By: _____

Explanations / Comments

Report Comment Entered:

F:/SHARE/QC/DOCCONTROL/FORMS/SMPINTG04 labeled by: _____

checked by: _____



Pacific EcoRisk

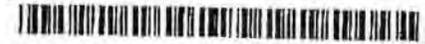
ENVIRONMENTAL CONSULTING & TESTING

835 Arnold Drive, Suite 104, Martinez, CA 94553

(925) 313-8080 FAX (925) 313-8089

2004080002 08/ 2004
PACIFIC ECO TAT: S ard
82001

BSK CHAIN



Client Name:				Pacific EcoRisk		REQUESTED ANALYSIS									
Client Address:				835 Arnold Drive, Suite 104 Martinez, CA 94553		Color (SM2120 B Mod)	Turbidity (EPA 180.1)	TDS (EPA 160.1)	TOC (SM 5310 C)	E. coli (SM 9221 B)					
Sampled By:				PER											
Phone:				(925) 313-8080											
FAX:				(925) 313-8089											
Project Manager:				Stephen Clark											
Project Name:				East San Joaquin River Watershed Coalition											
PO Number:															
Client Sample ID	Sample Date	Sample Time	Sample Matrix*	Container		Color (SM2120 B Mod)	Turbidity (EPA 180.1)	TDS (EPA 160.1)	TOC (SM 5310 C)	E. coli (SM 9221 B)					
				Number	Type										
1 01-RSSJR-003 <i>mm</i>			FW	1	250-mL amber				X						
2 01-ARDCL-009	7/31/04	1607	FW	1	250-mL amber				X						477518
3 01-MRSFD-015	7/31/04	1442	FW	1	250-mL amber				X						477519
4 01-DSAGR-025 <i>024</i>	7/31/04	1200	FW	1	250-mL amber				X						20
5 01-DSAGR-026 <i>025</i>	7/31/04	1201	FW	1	250-mL amber				X						21
6 01-DSAGR-027 <i>026</i>	7/31/04	1202	FW	1	250-mL amber				X						22
7 01-DCAGR-045 <i>038</i>	7/31/04	1052	FW	1	250-mL amber				X						23
8 01-ASATA-047 <i>mm</i>			FW	1	250-mL amber										
9															
10 01-DSAGR-024 <i>MS/MSD</i>	7/31/04	1159	FW	1	250-mL Amber				X						477524
11															
Correct Containers:				Yes	No	RELIQUISHED BY									
Sample Temperature:				Ambient	Cold	Warm	Signature: <i>Michael McElroy</i>								
Sample Preservative:				Yes	No		Print: Michael McElroy								
Turnaround Time:				STD	Specify:		Organization: PER								
Comments: <i>024</i> 01-DSAGR-025 = Field Blank <i>026</i> 01-DSAGR-026 = Field Duplicate <i>MS/MSD</i> 01-DSAGR-024 = For BSK internal Matrix Spike/Matrix Spike Duplicate (do not invoice)						DATE: 7/31/04 TIME: 1622									
						RECEIVED BY									
						Signature: <i>Sophia Kemp</i>									
						Print: SOPHIA KEMP									
						Organization: BSK ASSOC. (LAB)									
						DATE: 7/31/04 TIME: 1755									

*MATRIX CODES: (SED = Sediment); (FW = Freshwater); (WW = Wastewater); (STRMW = Stormwater)

Growth Pick-up @ Food Lab @ 11:30 A.M. 8/1/04
Growth Delivered to BSK LAB @ 6:45 AM 8/2/04

Sandy Baum 8/2/04 1045

Date Received 8/2/04

Pre

PACIFIC ECO

TAT: Standard

82001



Section 1

Shipping: Walk In CAO SJVC BSK UPS GSO ILS Mail Fed Exp. Airborne

Has chilling process begun? Y N Samples Received: Chilled to Tough / Ambient / On Ice

Section 2

No. Coolers/Ice Chests: _____ Temperature(s): _____

Was Temperature In Range: Y N Received On Ice: Wet Blue

Describe type of packing materials: Bubble Wrap

Were ice chest custody seals present? Y N Intact: Y N

Section 3

	Completed			Completed	
	Yes	No		Yes	No
Was COC Received	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Analysis Requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Date Sampled	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Any hold times less than 72hrs	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Time Sampled	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Client Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample Identification	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Address	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Special Storage/Handling Ins.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Telephone #	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Section 4

	Yes	No
Did all bottles arrive unbroken and intact?:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were bottle custody seals present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Were bottle custody seals intact?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Did all bottle labels agree with COC?:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were correct containers used for the tests requested?:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were correct preservations used for the tests requested?:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Was a sufficient amount of sample sent for tests indicated?:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were bubbles present in VOA Vials?:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Were Ascorbic Acid Bottles received with the VOAs	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Section 5

Samples Split / Preserved at lab?: Y N By: _____ Date: _____

Was Project Manager notified of discrepancies: Y N N/A Notified By: _____

Explanations / Comments

Empty lines for Explanations / Comments

Report Comment Entered:

Sample Integrity

Pg. 1 of 2

CI

2004090109

09/01/2004

PACIFIC ECO

TAT: Standard

91114

Date Received 9-1-04



Section 1

Shipping: Walk In CAO SJVC BSK UPS GSO U.S. Mail Fed Exp. Airborne

Has chilling process begun? Y N Samples Received: Chilled to Touch / Ambient / On Ice

Section 2

No. Coolers/Ice Chests: Temperature(s):

Was Temperature In Range: Y N Received On Ice: Wet Blue

Describe type of packing materials: Bubble Wrap

Were ice chest custody seals present? Y N Intact: Y N

Section 3

	Completed			Completed	
	Yes	No		Yes	No
Was COC Received	<input checked="" type="checkbox"/>		Analysis Requested	<input checked="" type="checkbox"/>	
Date Sampled	<input checked="" type="checkbox"/>		Any hold times less than 72hrs		<input checked="" type="checkbox"/>
Time Sampled	<input checked="" type="checkbox"/>		Client Name	<input checked="" type="checkbox"/>	
Sample Identification	<input checked="" type="checkbox"/>		Address	<input checked="" type="checkbox"/>	
Special Storage/Handling Ins.		<input checked="" type="checkbox"/>	Telephone #	<input checked="" type="checkbox"/>	

Section 4

	Yes	No
Did all bottles arrive unbroken and intact?:	<input checked="" type="checkbox"/>	
Were bottle custody seals present?		<input checked="" type="checkbox"/>
Were bottle custody seals intact?		<input checked="" type="checkbox"/>
Did all bottle labels agree with COC?:	<input checked="" type="checkbox"/>	
Were correct containers used for the tests requested?:	<input checked="" type="checkbox"/>	
Were correct preservations used for the tests requested?:	<input checked="" type="checkbox"/>	
Was a sufficient amount of sample sent for tests indicated?:	<input checked="" type="checkbox"/>	
Were bubbles present in VOA Vials?:	<input checked="" type="checkbox"/>	
Were Ascorbic Acid Bottles received with the VOAs	<input checked="" type="checkbox"/>	

Section 5

Samples Split / Preserved at lab?: Y N By: Date:

Was Project Manager notified of discrepancies: Y / N N/A Notified By:

Explanations / Comments

Report Comment Entered:

F:/SHARE/QC/DOCCONTROL/FORMS/SMPINTG04 labeled by: checked by:



Pacific EcoRisk

ENVIRONMENTAL CONSULTING & TESTING

835 Arnold Drive, Suite 104, Martinez, CA 94553
(925) 313-8080 FAX (925) 313-8089

2004092146

09/30/2004

PACIFIC ECO

TAT: Standard

930035

IRD

BSK CH



30085

Client Name:		Pacific EcoRisk				REQUESTED ANALYSIS						
Client Address:		835 Arnold Drive, Suite 104 Martinez, CA 94553				Color (SM2120 B Mod)	Turbidity (EPA 180.1)	TDS (EPA 160.1)	TOC (SM 5310 C)	E: col/ (SM 9221 B)		
Sampled By:												
Phone:		(925) 313-8080										
FAX:		(925) 313-8089										
Project Manager:		Stephen Clark										
Project Name:		East San Joaquin River Watershed Coalition										
PO Number:												
Client Sample ID	Sample Date	Sample Time	Sample Matrix*	Container		Color (SM2120 B Mod)	Turbidity (EPA 180.1)	TDS (EPA 160.1)	TOC (SM 5310 C)	E: col/ (SM 9221 B)		
				Number	Type							
1 03-ARDCL-004	9/29/04	1528	FW	1	1-L HDPE	x	x	x				503481
2 03-MRSFD-010	9/29/04	1343	FW	1	1-L HDPE	x	x	x				82
3 03-DSAGR-016	9/29/04	1003	FW	1	1-L HDPE	x	x	x				83
4 03-DCAGR-022	9/29/04	858	FW	1	1-L HDPE	x	x	x				84
5												
5 6 03-ARDCL-003	9/29/04	1527	FW	1	250-mL amber				x			503485
6 03-MRSFD-009	9/29/04	1346	FW	1	250-mL amber				x			86
7 03-DSAGR-015	9/29/04	1002	FW	1	250-mL amber				x			87
8 03-DCAGR-021	9/29/04	857	FW	1	250-mL amber				x			88
9 11 03-MRSFD-MS/MSD	9/29/04	1341	FW	1	250-mL amber				x			
Correct Containers:		Yes	No			RELIQUISHED BY						
Sample Temperature:		Ambient	Cold	Warm		Signature:						
Sample Preservative:		Yes	No			Print:		Mike McElroy				
Turnaround Time:		STD	Specify:		Organization:		PER					
Comments:		03-MRSFD-MS/MSD = For BSK internal Matrix Spike/Matrix Spike Duplicate (do not invoice)				DATE:		9-29-04		TIME:		1532
						RECEIVED BY						
						Signature:						
						Print:		Sandy Bacon				
		Organization:										
		DATE:		9/30/04		TIME:		9:35				

*MATRIX CODES: (SED = Sediment); (FW = Freshwater); (WW = Wastewater); (STRMW = Stormwater)

Paul Paul 9/30/04 0935

Date Received



Section 1

Shipping: Walk In CAO SJVC BSK UPS GSO U.S. Mail Fed Exp. Airborne

Has chilling process begun? Y N Samples Received: Chilled to Touch / Ambient / On Ice

Section 2

No. Coolers/Ice Chests: _____ Temperature(s): _____

Was Temperature In Range: Y N Received On Ice: Wet Blue

Describe type of packing materials: Bubble Wrap

Were ice chest custody seals present? Y N Intact: Y N

Section 3

	Completed			Completed	
	Yes	No		Yes	No
Was COC Received	<u>-</u>		Analysis Requested	<u>-</u>	
Date Sampled	<u>-</u>		Any hold times less than 72hrs	<u>-</u>	<u>48hrs</u>
Time Sampled	<u>-</u>		Client Name	<u>-</u>	
Sample Identification	<u>-</u>		Address	<u>-</u>	
Special Storage/Handling Ins.		<u>-</u>	Telephone #	<u>-</u>	

Section 4

	Yes	No
Did all bottles arrive unbroken and intact?:	<u>-</u>	
Were bottle custody seals present?		<u>-</u>
Were bottle custody seals intact?		<u>-</u>
Did all bottle labels agree with COC?:	<u>-</u>	
Were correct containers used for the tests requested?:	<u>-</u>	
Were correct preservations used for the tests requested?:	<u>-</u>	
Was a sufficient amount of sample sent for tests indicated?:	<u>-</u>	
Were bubbles present in VOA Vials?:		<u>-</u>
Were Ascorbic Acid Bottles received with the VOAs		<u>-</u>

Section 5

Samples Split / Preserved at lab?: Y N By: _____ Date: _____

Was Project Manager notified of discrepancies: Y / N N/A Notified By: [Signature]

Explanations / Comments

Report Comment Entered: _____

F:/SHARE/QC/DOCCONTROL/FORMS/SMPINTG04 labeled by: [Signature] checked by: [Signature]



Pacific EcoRisk

ENVIRONMENTAL CONSULTING & TESTING

835 Arnold Drive, Suite 104, Martinez, CA 94553
(925) 313-8080 FAX (925) 313-8089

821052 BSK CHAIN-OF-CUSTODY RECORD

2004080245

Client Name:		Pacific EcoRisk				REQUESTED ANALYSIS									
Client Address:		835 Arnold Drive, Suite 104 Martinez, CA 94553				Color (SM2120 B Mod)	Turbidity (EPA 180.1)	TDS (EPA 160.1)	TOC (SM 5310 C)	E. coli (SM 9221 B)					
Sampled By:		PER													
Phone:		(925) 313-8080													
FAX:		(925) 313-8089													
Project Manager:		Stephen Clark													
Project Name:		East San Joaquin River Watershed Coalition													
PO Number:															
Client Sample ID	Sample Date	Sample Time	Sample Matrix*	Container		Color (SM2120 B Mod)	Turbidity (EPA 180.1)	TDS (EPA 160.1)	TOC (SM 5310 C)	E. coli (SM 9221 B)					
				Number	Type										
01-RSSJR-002 MM			FW	1	100 mL poly						X				
01-ARDCL-008	7/31/04	1606	FW	1	100 mL poly						X				
01-MRSFD-014	7/31/04	1141	FW	1	100 mL poly						X				
01-DSAGR-021	7/31/04	1203	FW	1	100 mL poly						X				
01-DSAGR-022	7/31/04	1204	FW	1	100 mL poly						X				
01-DSAGR-023	7/31/04	1205	FW	1	100 mL poly						X				
01-DCAGR-038 ^{MM} 037	7/31/04	1051	FW	1	100 mL poly						X				
01-ASATA-048 MM			FW	1	100 mL poly						*				
01DCAGR037(Dup)											X				
Correct Containers:		Yes	No			RELIQUISHED BY									
Sample Temperature:		Ambient	Cold	Warm		Signature: <i>M. McElroy</i>									
Sample Preservative:		Yes	No			Print: Michael McElroy									
Turnaround Time:		STD	Specify:			Organization: PER									
Comments: 01-DSAGR-021 = Field Blank 01-DSAGR-022 = Field Duplicate → Inadequate sample. 01-DCAGR037 chosen as Dup. 07/31/04 sic					DATE: 7/31/04									TIME: 1622	
					RECEIVED BY										
					Signature: <i>S. Kemp</i>										
					Print: SOPHIA Kemp										
Organization: BSK Labs															
DATE: 7/31/04									TIME: 1755						

FOOD LAB #
2014201
2014202
10320
2014203
2014204
2014205
2014206
2014207
2014208
2014209
2014210
2014211

*MATRIX CODES: (SED = Sediment); (FW = Freshwater); (WW = Wastewater); (STRMW = Stormwater)



Pacific EcoRisk
ENVIRONMENTAL CONSULTING & TESTING

835 Arnold Drive, Suite 104, Martinez, CA 94553
(925) 313-8080 FAX (925) 313-8089

BSK CHAIN-OF-CUSTODY RECORD

20040908AP

Client Name: Pacific EcoRisk		<table border="1"> <thead> <tr> <th colspan="5">REQUESTED ANALYSIS</th> </tr> <tr> <th>Color (SM2120 B Mod)</th> <th>Turbidity (EPA 180.1)</th> <th>TDS (EPA 160.1)</th> <th>TOC (SM 5310 C)</th> <th>E. coli (SM 9221 B)</th> </tr> </thead> <tbody> <tr><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>					REQUESTED ANALYSIS					Color (SM2120 B Mod)	Turbidity (EPA 180.1)	TDS (EPA 160.1)	TOC (SM 5310 C)	E. coli (SM 9221 B)																									
REQUESTED ANALYSIS																																									
Color (SM2120 B Mod)	Turbidity (EPA 180.1)						TDS (EPA 160.1)	TOC (SM 5310 C)	E. coli (SM 9221 B)																																
Client Address: 835 Arnold Drive, Suite 104 Martinez, CA 94553																																									
Sampled By:																																									
Phone: (925) 313-8080																																									
FAX: (925) 313-8089																																									
Project Manager: Stephen Clark																																									
Project Name: East San Joaquin River Watershed Coalition																																									
PO Number:																																									
Client Sample ID	Sample Date	Sample Time	Sample Matrix*	Container		Color (SM2120 B Mod)	Turbidity (EPA 180.1)	TDS (EPA 160.1)	TOC (SM 5310 C)	E. coli (SM 9221 B)																															
				Number	Type																																				
02-ARDCL-003	8/31/04	1707	FW	1	100 mL poly					x																															
02-MRSFD-010	8/31/04	1502	FW	1	100 mL poly					x																															
02-DSAGR-017	8/31/04	1202	FW	1	100 mL poly					x																															
02-DCAGR-025	8/31/04	831	FW	1	100 mL poly					x			*																												
Correct Containers:		Yes	No			RELIQUISHED BY																																			
Sample Temperature:		Ambient	Cold	Warm		Signature: <i>Michael McClintock</i>																																			
Sample Preservative:		Yes	No			Print: Michael McClintock																																			
Turnaround Time:		STD	Specify:		Organization: PER																																				
Comments:						DATE: 8-31-04		TIME: 1713																																	
						RECEIVED BY																																			
						Signature: <i>Barbara Hernandez</i>																																			
						Print: Barbara Hernandez																																			
						Organization: BSK-R																																			
						DATE: 8/31/04		TIME: 1850																																	

01314 FD
01315 TE
01316 TT
54347 TG

*MATRIX CODES: (SED = Sediment); (FW = Freshwater); (WW = Wastewater); (STRMW = Stormwater)

*Sample received past hold time



Pacific EcoRisk

ENVIRONMENTAL CONSULTING & TESTING

835 Arnold Drive, Suite 104, Martinez, CA 94553
(925) 313-8080 FAX (925) 313-8089

BSK

2004090036
PACIFIC ECO
91078

09/01/2004

TAT: Standard **CORD**



Client Name:		Pacific EcoRisk					REQUESTED ANALYSIS								
Client Address:		835 Arnold Drive, Suite 104 Martinez, CA 94553					Color (SM2120 B Mod)	Turbidity (EPA 180.1)	TDS (EPA 160.1)	TOC (SM 5310 C)	E. coli (SM 9221 B)				
Sampled By:															
Phone:		(925) 313-8080													
FAX:		(925) 313-8089													
Project Manager:		Stephen Clark													
Project Name:		East San Joaquin River Watershed Coalition													
PO Number:															
Client Sample ID	Sample Date	Sample Time	Sample Matrix*	Container		Color (SM2120 B Mod)	Turbidity (EPA 180.1)	TDS (EPA 160.1)	TOC (SM 5310 C)	E. coli (SM 9221 B)					
				Number	Type										
02-ARDCL-003	8-31-04	1707	FW	1	100 mL poly						x				
02-MRSFD-010	8-31-04	1502	FW	1	100 mL poly						x				
02-DSAGR-017	8-31-04	1202	FW	1	100 mL poly						x				
02-DCAGR-025	8-31-04	831	FW	1	100 mL poly						x			*	
Correct Containers:		Yes	No			RELIQUISHED BY									
Sample Temperature:		Ambient	Cold	Warm			Signature: <i>Michael McElroy</i>								
Sample Preservative:		Yes	No			Print: <i>Michael McElroy</i>									
Turnaround Time:		STD	Specify:			Organization: <i>PER</i>									
Comments:						DATE: <i>8-31-04</i> TIME: <i>1713</i>									
						RECEIVED BY									
						Signature: <i>Barbara Hernandez</i>									
						Print: <i>Barbara Hernandez</i>									
						Organization: <i>BSK-P</i>									
						DATE: <i>8/31/04</i> TIME: <i>1850</i>									

31314 TD +
 435 TE -
 462 F +
 471 G +

*MATRIX CODES: (SED = Sediment); (FW = Freshwater); (WW = Wastewater); (STRMW = Stormwater)

*Sample received past hold time
 Administrative Record
 Page 8351



Pacific EcoRisk

ENVIRONMENTAL CONSULTING & TESTING

835 Arnold Drive, Suite 104, Martinez, CA 94553
(925) 313-8080 FAX (925) 313-8089

2004092146 09/30/2004
PACIFIC ECO TAT: Standard
930035

BSK CH

IRD



30035

Client Name:		Pacific EcoRisk				REQUESTED ANALYSIS						
Client Address:		835 Arnold Drive, Suite 104 Martinez, CA 94553				Color (SM2120 B Mod)	Turbidity (EPA 180.1)	TDS (EPA 160.1)	TOC (SM 5310 C)	Ei coli (SM 9221 B)		
Sampled By:												
Phone:		(925) 313-8080										
FAX:		(925) 313-8089										
Project Manager:		Stephen Clark										
Project Name:		East San Joaquin River Watershed Coalition										
PO Number:												
Client Sample ID	Sample Date	Sample Time	Sample Matrix*	Container		Color (SM2120 B Mod)	Turbidity (EPA 180.1)	TDS (EPA 160.1)	TOC (SM 5310 C)	Ei coli (SM 9221 B)		
				Number	Type							
1 03-ARDCL-004	9/29/04	1528	FW	1	1-L HDPE	x	x	x				
2 03-MRSFD-010	9/29/04	1345	FW	1	1-L HDPE	x	x	x				
3 03-DSAGR-016	9/29/04	1003	FW	1	1-L HDPE	x	x	x				
4 03-DCAGR-022	9/29/04	858	FW	1	1-L HDPE	x	x	x				
5												
5 6 03-ARDCL-003	9/29/04	1527	FW	1	250-mL amber				x			
6 7 03-MRSFD-009	9/29/04	1346	FW	1	250-mL amber				x			
7 8 03-DSAGR-015	9/29/04	1002	FW	1	250-mL amber				x			
8 9 03-DCAGR-021	9/29/04	857	FW	1	250-mL amber				x			
9 10 11 03-MRSFD-MS/MSD	9/29/04	1341	FW	1	250-mL amber				x			
Correct Containers:		Yes	No									
Sample Temperature:		Ambient	Cold	Warm								
Sample Preservative:		Yes	No									
Turnaround Time:		STD	Specify:									
Comments:					RELIQUISHED BY							
03-MRSFD-MS/MSD = For BSK Internal Matrix Spike/Matrix Spike Duplicate (do not invoice)					Signature: <i>Mike McElroy</i>							
					Print: Mike McElroy							
					Organization: PER							
					DATE: 9-29-04				TIME: 1532			
					RECEIVED BY							
					Signature: <i>Sandy Bacon</i>							
					Print: Sandy Bacon							
					Organization:							
DATE: 9/30/04				TIME: 955								

*MATRIX CODES: (SED = Sediment); (FW = Freshwater); (WW = Wastewater); (STRMW = Stormwater)

Paul Paul 9/30/04 0935

Sample Integrity

Pg. 1 of 2

2004092146
PACIFIC ECO
930035

09/30/2004
TAT: Standard

Date Received



Section 1
 Shipping: Walk In CAO SJVC BSK UPS GSO U.S. Mail Fed Exp. Airborne
 Has chilling process begun? Y N Samples Received: Chilled to Touch / Ambient / On Ice

Section 2
 No. Coolers/Ice Chests: _____ Temperature(s): _____
 Was Temperature In Range: Y N Received On Ice: Wet Blue
 Describe type of packing materials: Bubble Wrap
 Were ice chest custody seals present? Y N Intact: Y N

Section 3	Completed			Completed	
	Yes	No		Yes	No
Was COC Received	<u>-</u>		Analysis Requested	<u>-</u>	
Date Sampled	<u>-</u>		Any hold times less than 72hrs	<u>-</u>	<u>48hrs</u>
Time Sampled	<u>-</u>		Client Name	<u>-</u>	
Sample Identification	<u>-</u>		Address	<u>-</u>	
Special Storage/Handling Ins.		<u>-</u>	Telephone #	<u>-</u>	

Section 4	Yes	No
Did all bottles arrive unbroken and intact?:	<u>-</u>	
Were bottle custody seals present?		<u>-</u>
Were bottle custody seals intact?		<u>-</u>
Did all bottle labels agree with COC?:	<u>-</u>	
Were correct containers used for the tests requested?:	<u>-</u>	
Were correct preservations used for the tests requested?:	<u>-</u>	
Was a sufficient amount of sample sent for tests indicated?:	<u>-</u>	
Were bubbles present in VOA Vials?:		<u>-</u>
Were Ascorbic Acid Bottles received with the VOAs		<u>-</u>

Section 5
 Samples Split / Preserved at lab?: Y N By: _____ Date: _____
 Was Project Manager notified of discrepancies: Y / N N/A Notified By: [Signature]
 Explanations / Comments

 Report Comment Entered:



Pacific EcoRisk

ENVIRONMENTAL CONSULTING & TESTING

835 Arnold Drive, Suite 104, Martinez, CA 94553

(925) 313-8080 FAX (925) 313-8089

APPL CHAIN-OF-CUSTODY RECORD

Client Name: Pacific EcoRisk				REQUESTED ANALYSIS															
Client Address: 835 Arnold Drive, Suite 104 Martinez, CA 94553				EPA 1660 Mod (Pyrethroids: esfenvalerate, permethrin, cypermethrin, L-cyhalothrin) EPA 8141a (Organophosphate: Diazinon, Chlorpyrifos)															
Sampled By: PER																			
Phone: (925) 313-8080																			
FAX: (925) 313-8089																			
Project Manager: Stephen Clark																			
Project Name: East San Joaquin River Watershed Coalition																			
PO Number:																			
Client Sample ID	Sample Date	Sample Time	Sample Matrix*	Container															
				Number	Type														
01-RSSJR-006 MM			FW	1	1-L amber														
01-ARDCL-012	7/31/04	1610	FW	1	1-L amber														
01-MRSFD-018	7/31/04	1445	FW	1	1-L amber														
01-DSAGR-025 ⁰³³	7/31/04	1154	FW	1	1-L amber														
01-DSAGR-026 ⁰³⁴	7/31/04	1155	FW	1	1-L amber														
01-DSAGR-027 ⁰³⁵	7/31/04	1156	FW	1	1-L amber														
01-DCAGR-043 ⁰⁴¹	7/31/04	1055	FW	1	1-L amber														
01-ASATA-044 MM			FW	1	1-L amber														
01-DSAGR-021 ^{MS/MS}	7/31/04	1150	FW	1	1-gallon amber	x													
Correct Containers:	Yes	No			RELIQUISHED BY														
Sample Temperature:	Ambient	Cold	Warm		Signature:														
Sample Preservative:	Yes	No			Print:	Michael McElroy													
Turnaround Time:	STD	Specify:			Organization:	PER													
Comments: 033 SL 01-DSAGR-025 = Field Blank 01-DSAGR-026 = Field Duplicate 01-DSAGR-021 = For APPL internal Matrix Spike/Matrix Spike Duplicate (do not invoice)					DATE:	7/31/04					TIME:	1622							
				RECEIVED BY															
				Signature:															
				Print:															
					Organization:														
					DATE:	8/2/04					TIME:	0800							

*MATRIX CODES: (SED = Sediment); (FW = Freshwater); (WW = Wastewater); (STRMW = Stormwater)



Pacific EcoRisk

ENVIRONMENTAL CONSULTING & TESTING

835 Arnold Drive, Suite 104, Martinez, CA 94553
 (925) 313-8080 FAX (925) 313-8089

APPL CHAIN-OF-CUSTODY RECORD

Client Name: Pacific EcoRisk Client Address: 835 Arnold Drive, Suite 104 Martinez, CA 94553				REQUESTED ANALYSIS																	
Sampled By: PER				EPA 1660 Mod (Pyrethroids; esfenvalerate, permethrin, cypermethrin, L-cyhalothrin) EPA 8141a (Organophosphate: Diazinon, Chlorpyrifos)																	
Phone: (925) 313-8080																					
FAX: (925) 313-8089																					
Project Manager: Stephen Clark																					
Project Name: East San Joaquin River Watershed Coalition																					
PO Number:																					
Client Sample ID	Sample Date	Sample Time	Sample Matrix*	Container																	
				Number	Type																
01-RSSJR-005			FW	1	1-L amber	x															
01-ARDCL-011	7/31/04	1609	FW	1	1-L amber	x															
01-MRSFD-017	7/31/04	1444	FW	1	1-L amber	x															
01-DSAGR-032 ⁰³⁰	7/31/04	1151	FW	1	1-L amber	x															
01-DSAGR-033 ⁰³¹	7/31/04	1152	FW	1	1-L amber	x															
01-DSAGR-034 ⁰³²	7/31/04	1153	FW	1	1-L amber	x															
01-DCAGR-042 ⁰⁴⁰	7/31/04	1054	FW	1	1-L amber	x															
01-ASATA-045 ^{M/M}			FW	1	1-L amber	x															
Correct Containers: Yes No				RELIQUISHED BY																	
Sample Temperature: Ambient Cold Warm				Signature: <i>Michael McElroy</i>																	
Sample Preservative: Yes No				Print: Michael McElroy																	
Turnaround Time: STD Specify:				Organization: PER																	
Comments: ⁰³⁰ 01-DSAGR-032 = Field Blank ⁰³¹ 01-DSAGR-033 = Field Duplicate ⁰³¹				DATE: 7/31/04		TIME: 1600															
				RECEIVED BY																	
				Signature: <i>[Signature]</i>																	
				Print:																	
				Organization:																	
				DATE: 8/2/04		TIME: 0800															

*MATRIX CODES: (SED = Sediment); (FW = Freshwater); (WW = Wastewater); (STRMW = Stormwater)



Pacific EcoRisk

ENVIRONMENTAL CONSULTING & TESTING

835 Arnold Drive, Suite 104, Martinez, CA 94553
(925) 313-8080 FAX (925) 313-8089

APPL CHAIN-OF-CUSTODY RECORD

Client Name: Pacific EcoRisk				REQUESTED ANALYSIS												
Client Address: 835 Arnold Drive, Suite 104 Martinez, CA 94553				EPA 1660 Mod (Pyrethroids: estenvalerate, permethrin, cypermethrin, L-cyhalothrin) EPA 8141a (Organophosphate: Diazinon, Chlorpyrifos)												
Sampled By:																
Phone: (925) 313-8080																
FAX: (925) 313-8089																
Project Manager: Stephen Clark																
Project Name: East San Joaquin River Watershed Coalition																
PO Number:																
Client Sample ID	Sample Date	Sample Time	Sample Matrix*	Container		x	x									
				Number	Type											
1 02-ARDCL-006	8-31-04	1710	FW	1	1-L amber	x										
2 02-MRSFD-013	8-31-04	1505	FW	1	1-L amber	x										
3 02-DSAGR-020	8-31-04	1205	FW	1	1-L amber	x										
4 02-DCAGR-028	8-31-04	834	FW	1	1-L amber	x										
5 02-ARDCL-007	8-31-04	1711	FW	1	1-L amber		x									
6 02-MRSFD-014	8-31-04	1506	FW	1	1-L amber		x									
7 02-DSAGR-021	8-31-04	1206	FW	1	1-L amber		x									
8 02-DCAGR-029	8-31-04	835	FW	1	1-L amber		x									
9																
10 02-DCAGR-MS/MSD	8-31-04	826	FW	1	1-gallon amber	x	x									
11																
12																
13																
Correct Containers:				Yes	No	RELIQUISHED BY										
Sample Temperature:				Ambient	Cold	Warm	Signature: <i>Michael McElroy</i>									
Sample Preservative:				Yes	No	Print: Michael McElroy										
Turnaround Time:				STD	Specify:	Organization: PCR										
Comments:				DATE: 8-31-04										TIME: 1710		
02-DCAGR-MS/MSD = For APPL Internal Matrix Spike/Matrix Spike Duplicate (do not invoice)				RECEIVED BY												
				Signature: <i>[Signature]</i>												
				Print:												
				Organization:												
				DATE: 9/1/04										TIME: 0800		

*MATRIX CODES: (SED = Sediment); (FW = Freshwater); (WW = Wastewater); (STRMW = Stormwater)



Pacific EcoRisk

ENVIRONMENTAL CONSULTING & TESTING

835 Arnold Drive, Suite 104, Martinez, CA 94553
(925) 313-8080 FAX (925) 313-8089

APPL CHAIN-OF-CUSTODY RECORD

Client Name:				Pacific EcoRisk		REQUESTED ANALYSIS															
Client Address:				835 Arnold Drive, Suite 104 Martinez, CA 94553		EPA 1660 Mod (Pyrethroids: esfenvalerate, permethrin, cypermethrin, L-cyhalothrin) EPA 8141a (Organophosphate: Diazinon, Chlorpyrifos)															
Sampled By:																					
Phone:				(925) 313-8080																	
FAX:				(925) 313-8089																	
Project Manager:				Stephen Clark																	
Project Name:				East San Joaquin River Watershed Coalition																	
PO Number:																					
Client Sample ID	Sample Date	Sample Time	Sample Matrix*	Container		EPA 1660 Mod	EPA 8141a														
				Number	Type																
03-ARDCL-005	9/29/04	1529	FW	1	1-L amber	x															
03-MRSFD-011	9/29/04	1346	FW	1	1-L amber	x															
03-DSAGR-017	9/29/04	1004	FW	1	1-L amber	x															
03-DCAGR-023	9/29/04	859	FW	1	1-L amber	x															
03-ARDCL-006	9/29/04	1530	FW	1	1-L amber		x														
03-MRSFD-012	9/29/04	1347	FW	1	1-L amber		x														
03-DSAGR-018	9/29/04	1005	FW	1	1-L amber		x														
03-DCAGR-024	9/29/04	900	FW	1	1-L amber		x														
03-MRSFD-MS/MSD	9/29/04	1340	FW	1	1-gallon amber	x	x														
Correct Containers:				Yes	No	RELIQUISHED BY															
Sample Temperature:				Ambient	Cold	Warm	Signature:		<i>Mike McElroy</i>												
Sample Preservative:				Yes	No	Print:		Mike McElroy													
Turnaround Time:				STD	Specify:	Organization:		PER													
Comments: 03-MRSFD-MS/MSD = For APPL internal Matrix Spike/Matrix Spike Duplicate (do not invoice)				DATE:		9-29-04		TIME:		1531											
				RECEIVED BY		Signature:		<i>[Signature]</i>													
				Print:																	
				Organization:																	
				DATE:		9/30/04		TIME:		0800											

*MATRIX CODES: (SED = Sediment); (FW = Freshwater); (WW = Wastewater); (STRMW = Stormwater)



Pacific EcoRisk

ENVIRONMENTAL CONSULTING & TESTING

835 Arnold Drive, Suite 104, Martinez, CA 94553
(925) 313-8080 FAX (925) 313-8089

PER CHAIN-OF-CUSTODY RECORD

Client Name:		Pacific EcoRisk				REQUESTED ANALYSIS								
Client Address:		835 Arnold Drive, Suite 104 Martinez, CA 94553				Acute Ceria, Acute FHM, Chronic Selenastrum								
Sampled By:														
Phone:		(925) 313-8080												
FAX:		(925) 313-8089												
Project Manager:		Stephen Clark												
Project Name:		East San Joaquin River Watershed Coalition												
PO Number:														
Client Sample ID	Sample Date	Sample Time	Sample Matrix*	Container		X								
				Number	Type									
1 01-RSSJR-001 MM			FW	1	5-gallon jerician	x								
2 01-ARDCL-007	7/31/04	1605	FW	1	5-gallon jerician	x								
3 01-MRSFD-013	7/31/04	1440	FW	1	5-gallon jerician	x								
4 01-DSAGR-019	7/31/04	1157	FW	1	5-gallon jerician	x								
5 01-DSAGR-020	7/31/04	1158	FW	1	5-gallon jerician	x								
6 01-DCAGR-006 036	7/31/04	1050	FW	1	5-gallon jerician	x								
7 01-ASATA-049 MM			FW	1	5-gallon jerician	x								
8														
9														
10														
11														
Correct Containers:		Yes	No			RELIQUINSHED BY								
Sample Temperature:		Ambient	Cold	Warm		Signature:	Mike McElroy							
Sample Preservative:		Yes	No			Print:	Mike McElroy							
Turnaround Time:		STD	Specify:			Organization:	PER							
Comments: 01-DSAGR-019 = Field duplicate						DATE:	7/31/04	TIME:	1605					
						RECEIVED BY								
						Signature:	Y. Khadiyeva 8-1-04 830							
						Print:	Y. Khadiyeva							
						Organization:	PER							
						DATE:	8-01-04	TIME:	8:30					

*MATRIX CODES: (SED = Sediment); (FW = Freshwater); (WW = Wastewater); (STRMW = Stormwater)



Pacific EcoRisk

ENVIRONMENTAL CONSULTING & TESTING

835 Arnold Drive, Suite 104, Martinez, CA 94553
(925) 313-8080 FAX (925) 313-8089

PER CHAIN-OF-CUSTODY RECORD

Client Name: Pacific EcoRisk				REQUESTED ANALYSIS																			
Client Address: 835 Arnold Drive, Suite 104 Martinez, CA 94553				Acute Cerio, Acute FHM, Chronic Selenastrum Chronic 10-Day Hyallela																			
Sampled By:																							
Phone: (925) 313-8080																							
FAX: (925) 313-8089																							
Project Manager: Stephen Clark																							
Project Name: East San Joaquin River Watershed Coalition																							
PO Number:																							
Client Sample ID	Sample Date	Sample Time	Sample Matrix*		Container																		
				Number	Type																		
1 02-ARDCL-001	8-31-04	1745	FW	1	5-gallon jerician	x																	
2 02-MRSFD-008	8-31-04	1750	FW	1	5-gallon jerician	x																	
3 02-DSAGR-015	8-31-04	1200	FW	1	5-gallon jerician	x																	
4 02-DCAGR-022	8-31-04	828	FW	1	5-gallon jerician	x																	
5 02-ARDCL-002	8-31-04	1706	SED	1	2-L Glass Jar		x																
6 02-MRSFD-009	8-31-04	1501	SED	1	2-L Glass Jar		x																
7 02-DSAGR-016	8-31-04	1201	SED	1	2-L Glass Jar		x																
8 02-DCAGR-023	8-31-04	829	SED	1	2-L Glass Jar		x																
9 02-DCAGR-024	8-31-04	830	SED	1	2-L Glass Jar		x																
10																							
11																							
Correct Containers:	Yes	No			RELIQUISHED BY:																		
Sample Temperature:	Ambient	Cold	Warm		Signature:	<i>Michael McElroy</i>																	
Sample Preservative:	Yes	No			Print:	Michael McElroy																	
Turnaround Time:	STD	Specify:			Organization:	PER																	
Comments: 02-DCAGR-024 = Field Duplicate					DATE:	8-31-04	TIME:	1712	RECEIVED BY:														
					Signature:																		
					Print:																		
					Organization:																		
					DATE:							TIME:											

*MATRIX CODES: (SED = Sediment); (FW = Freshwater); (WW = Wastewater); (SRMW = Stormwater)



Pacific EcoRisk

ENVIRONMENTAL CONSULTING & TESTING

835 Arnold Drive, Suite 104, Martinez, CA 94553

(925) 313-8080 FAX (925) 313-8089

PER CHAIN-OF-CUSTODY RECORD

Client Name: Pacific EcoRisk		REQUESTED ANALYSIS																			
Client Address: 835 Arnold Drive, Suite 104 Martinez, CA 94553																					
Sampled By:		Acute Cerio , Acute FHM, Chronic Selenastrum	Chronic 10-Day Hyallela																		
Phone: (925) 313-8080																					
FAX: (925) 313-8089																					
Project Manager: Stephen Clark																					
Project Name: East San Joaquin River Watershed Coalition																					
PO Number:																					
Client Sample ID	Sample Date	Sample Time	Sample Matrix*	Container																	
				Number	Type																
1 03-ARDCL-001	9/29/04	1525	FW	5	1-Gal Amber Jug	x															
2 03-MRSFD-007	9/29/04	1342	FW	5	1-Gal Amber Jug	x															
3 03-DSAGR-013	9/29/04	1000	FW	5	1-Gal Amber Jug	x															
4 03-DCAGR-019	9/29/04	855	FW	5	1-Gal Amber Jug	x															
5																					
6																					
7																					
8																					
9																					
10																					
11																					
Correct Containers:		Yes	No		RELIQUISHED BY																
Sample Temperature:		Ambient	Cold	Warm	Signature:	<i>Mike McElroy</i>															
Sample Preservative:		Yes	No		Print:	Mike McElroy															
Turnaround Time:		STD	Specify:		Organization:	PER															
Comments:				DATE:	9-29-04	TIME:	1534														
				RECEIVED BY																	
				Signature:	<i>Katie Kinbra</i>																
				Print:	Katie Kinbra																
				Organization:	PER																
DATE:	9/20/04	TIME:	845																		

*MATRIX CODES: (SED = Sediment); (FW = Freshwater); (WW = Wastewater); (STRMW = Stormwater)

08/10/2004

Stephen Clark
Pacific EcoRisk
835 Arnold Drive Suite 104
Martinez, CA 94553



Dear Stephen Clark,

Thank you for selecting BSK Analytical Laboratories for your analytical testing needs. We have prepared this report in response to your request for analytical services. Please find enclosed the following sections for your complete laboratory report, each uniquely paginated:

- CASE NARRATIVE: An overview of the work performed.
- CERTIFICATE OF ANALYSIS: Analytical results.
- QUALITY CONTROL (QC) SUMMARY: QC supporting the results presented herein.
- REPORT OF SAMPLE INTEGRITY
- CHAIN OF CUSTODY FORM

Certification: I certify that this data package is in compliance with NELAC Standards for applicable analyses under NELAP Certificate #04227CA, and is in compliance with ELAP Standards for applicable certified analyses under ELAP Certificate #1180, except for the conditions listed.

If additional clarification of any information is required, please contact your Client Services Representative, Glen Brown, at (800) 877-8310 or (559) 497-2888.

BSK ANALYTICAL LABORATORIES



Glen Brown
Client Services Representative



Cynthia Hamilton
Quality Assurance Specialist



SAMPLE AND RECEIPT INFORMATION

The sample(s) was received, prepared, and analyzed within the method specified holding times unless otherwise noted on the Certificate of Analysis. Samples, when shipped, arrived within acceptable temperature requirements of 0° to 6° Celsius unless otherwise noted on the Report of Sample Integrity. Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.

QUALITY CONTROL

All analytical quality controls are within established method criteria except when noted in the Quality Control section or on the Certificate of Analysis. All positive results for EPA Methods 504.1, 502.2, and 524.2 require the analysis of a Field Reagent Blank (FRB) to confirm that the results are not a contamination error from field sampling steps. If Field Reagent Blanks were not submitted with the samples, this method requirement has not been performed. QC samples may include analytes not requested in this submission.

SAMPLE RESULT INFORMATION

Samples are analyzed as received (wet weight basis) unless noted here. The results relate only to the items tested. Any exceptions to be considered when evaluating these results are also listed here, if applicable. Results contained in this package shall not be reproduced, except in full, without written approval of BSK Analytical Laboratories.

<u>ORDER</u>	<u>TEST</u>	<u>ANALYTE</u>	<u>COMMENT</u>
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BSK ANALYTICAL LABORATORIES

Stephen Clark
 Pacific EcoRisk
 835 Arnold Drive Suite 104
 Martinez, CA 94553

Certificate of Analysis
 NELAP Certificate #04227CA
 ELAP Certificate #1180



Report Issue Date: 08/10/2004

BSK Submission #: 2004080001

BSK Sample ID #: 477512

Project ID:

Project Desc: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid
 Sample Description: 01-ARDCL-010
 Sample Comments:

Date Sampled: 07/31/2004
 Time Sampled: 1608
 Date Received: 08/02/2004

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Color (A.P.H.A)	SM 2120 B	150	units	1	5	5	08/02/04 09:30	08/02/04 09:30
pH	SM 4500-H+ B	8.4	Std.Unit	-	1	N/A	08/02/04 11:15	08/02/04 11:15
Total Dissolved Solids (TDS)	SM 2540 C	1400	mg/L	5	1	5	08/04/04	08/06/04
Turbidity	SM 2130 B	41	NTU	0.1	10	1.0	08/02/04 09:30	08/02/04 09:30

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 : PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Case Narrative for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code: [Barcode]

BSK ANALYTICAL LABORATORIES

Certificate of Analysis
NELAP Certificate #04227CA
ELAP Certificate #1180

Stephen Clark
 Pacific EcoRisk
 835 Arnold Drive Suite 104
 Martinez, CA 94553

BSK Submission #: 2004080001
BSK Sample ID #: 477513

Project ID:
 Submission Comments:
 Sample Type: Liquid
 Sample Description: 01-MRSFD-016
 Sample Comments:

Project Desc: East San Joaquin River Watershed Coalition



Report Issue Date: 08/10/2004

Date Sampled: 07/31/2004
 Time Sampled: 1443
 Date Received: 08/02/2004

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Color (A.P.H.A)	SM 2120 B	25	units	1	1	1	08/02/04 09:37	08/02/04 09:37
pH	SM 4500-H+ B	7.6	Std.Unit	-	1	N/A	08/02/04 11:11	08/02/04 11:11
Total Dissolved Solids (TDS)	SM 2540 C	39	mg/L	5	1	5	08/04/04	08/06/04
Turbidity	SM 2130 B	1.6	NTU	0.1	1	0.1	08/02/04 09:37	08/02/04 09:37

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 : PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Case Narrative for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code:

BSK ANALYTICAL LABORATORIES

Certificate of Analysis
 NELAP Certificate #04227CA
 ELAP Certificate #1180

Stephen Clark
 Pacific EcoRisk
 835 Arnold Drive Suite 104
 Martinez, CA 94553



Report Issue Date: 08/10/2004

BSK Submission #: 2004080001

BSK Sample ID #: 477514

Project ID:

Project Desc: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid
 Sample Description: 01-DSAGR-027
 Sample Comments:

Date Sampled: 07/31/2004
 Time Sampled: 1206
 Date Received: 08/02/2004

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Color (A.P.H.A)	SM 2120 B	ND	units	1	1	1	08/02/04 09:40	08/02/04 09:40
pH	SM 4500-H+ B	6.4	Std.Unit	-	1	N/A	08/02/04 11:07	08/02/04 11:07
Total Dissolved Solids (TDS)	SM 2540 C	ND	mg/L	5	1	5	08/04/04	08/06/04
Turbidity	SM 2130 B	0.10	NTU	0.1	1	0.1	08/02/04 09:40	08/02/04 09:40

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 : PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Case Narrative for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code:



Page 3 of 6

BSK ANALYTICAL LABORATORIES

Stephen Clark
 Pacific EcoRisk
 835 Arnold Drive Suite 104
 Martinez, CA 94553

Certificate of Analysis
 NELAP Certificate #04227CA
 ELAP Certificate #1180



Report Issue Date: 08/10/2004

BSK Submission #: 2004080001

BSK Sample ID #: 477515

Project ID:

Project Desc: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/31/2004

Sample Description: 01-DSAGR-028`

Time Sampled: 1207

Sample Comments:

Date Received: 08/02/2004

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Color (A.P.H.A)	SM 2120 B	200	units	1	10	10	08/02/04 09:44	08/02/04 09:44
pH	SM 4500-H+ B	8.0	Std.Unit	-	1	N/A	08/02/04 11:03	08/02/04 11:03
Total Dissolved Solids (TDS)	SM 2540 C	230	mg/L	5	1	5	08/04/04	08/06/04
Turbidity	SM 2130 B	82	NTU	0.1	10	1.0	08/02/04 09:44	08/02/04 09:44

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 : PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Case Narrative for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code:

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BSK ANALYTICAL LABORATORIES

Stephen Clark
 Pacific EcoRisk
 835 Arnold Drive Suite 104
 Martinez, CA 94553

Certificate of Analysis
 NELAP Certificate #04227CA
 ELAP Certificate #1180



BSK Submission #: 2004080001

BSK Sample ID #: 477516

Project ID:

Project Desc: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid
 Sample Description: 01-DSAGR-29
 Sample Comments:

Report Issue Date: 08/10/2004

Date Sampled: 07/31/2004
 Time Sampled: 1208
 Date Received: 08/02/2004

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Color (A.P.H.A)	SM 2120 B	200	units	1	10	10	08/02/04 09:48	08/02/04 09:48
pH	SM 4500-H+ B	8.0	Std.Unit	-	1	N/A	08/02/04 10:59	08/02/04 10:59
Total Dissolved Solids (TDS)	SM 2540 C	230	mg/L	5	1	5	08/04/04	08/06/04
Turbidity	SM 2130 B	93	NTU	0.1	10	1.0	08/02/04 09:48	08/02/04 09:48

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 : PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Case Narrative for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code: 

BSK ANALYTICAL LABORATORIES

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Report Issue Date: 08/10/2004

BSK Submission #: 2004080001

BSK Sample ID #: 477517

Project ID:

Project Desc: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid
 Sample Description: 01-DCAGR-039
 Sample Comments:

Date Sampled: 07/31/2004
 Time Sampled: 1053
 Date Received: 08/02/2004

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Color (A.P.H.A)	SM 2120 B	150	units	1	10	10	08/02/04 09:52	08/02/04 09:52
pH	SM 4500-H+ B	8.1	Std.Unit	-	1	N/A	08/02/04 10:55	08/02/04 10:55
Total Dissolved Solids (TDS)	SM 2540 C	230	mg/L	5	1	5	08/04/04	08/06/04
Turbidity	SM 2130 B	74	NTU	0.1	10	1.0	08/02/04 09:52	08/02/04 09:52

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 : PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Case Narrative for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code: 

Page 6 of 6

BSK ANALYTICAL LABORATORIES

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Report Issue Date: 09/08/2004

BSK Submission #: 2004090111

BSK Sample ID #: 491277

Project ID:

Project Desc: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid
 Sample Description: 02-ARDCL-005
 Sample Comments:

Date Sampled: 08/31/2004
 Time Sampled: 1709
 Date Received: 08/31/2004

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Color (A.P.H.A)	SM 2120 B	120	units	1	10	10	09/01/04 18:10	09/01/04 18:10
pH	SM 4500-H+ B	8.1	Std.Unit	-	1	N/A	09/01/04 20:50	09/01/04 20:50
Total Dissolved Solids (TDS)	SM 2540 C	710	mg/L	5	1	5	09/03/04	09/08/04
Turbidity	SM 2130 B	43	NTU	0.1	10	1.0	09/01/04 18:10	09/01/04 18:10

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 : PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Case Narrative for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code:

BSK ANALYTICAL LABORATORIES

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Report Issue Date: 09/08/2004

BSK Submission #: 2004090111

BSK Sample ID #: 491278

Project ID:

Project Desc: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid
 Sample Description: 02-MRSFD-012
 Sample Comments:

Date Sampled: 08/31/2004
 Time Sampled: 1504
 Date Received: 08/31/2004

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Color (A.P.H.A)	SM 2120 B	20	units	1	1	1	09/01/04 18:15	09/01/04 18:15
pH	SM 4500-J+B	7.7	Std.Unit	-	1	N/A	09/01/04 20:54	09/01/04 20:54
Total Dissolved Solids (TDS)	SM 2540 C	37	mg/L	5	1	5	09/03/04	09/08/04
Turbidity	SM 2130 B	1.4	NTU	0.1	1	0.1	09/01/04 18:15	09/01/04 18:15

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 : PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Case Narrative for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code:

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BSK ANALYTICAL LABORATORIES

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Report Issue Date: 09/08/2004

BSK Submission #: 2004090111

BSK Sample ID #: 491279

Project ID:

Project Desc: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid

Date Sampled: 08/31/2004

Sample Description: 02-DSAGR-019

Time Sampled: 1200

Sample Comments:

Date Received: 08/31/2004

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Color (A.P.H.A)	SM 2120 B	70	units	1	2	2	09/01/04 18:25	09/01/04 18:25
pH	SM 4500-H+ B	8.1	Std. Unit	-	1	N/A	09/01/04 20:58	09/01/04 20:58
Total Dissolved Solids (TDS)	SM 2540 C	280	mg/L	5	1	5	09/03/04	09/08/04
Turbidity	SM 2130 B	20	NTU	0.1	2	0.2	09/01/04 18:25	09/01/04 18:25

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 : PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Case Narrative for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code: [Barcode]

BSK ANALYTICAL LABORATORIES

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Certificate of Analysis
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 ELAP Certificate #1180



Report Issue Date: 09/08/2004

BSK Submission #: 2004090111

BSK Sample ID #: 491280

Project ID:

Project Desc: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid
 Sample Description: 02-DCAGR-027
 Sample Comments:

Date Sampled: 08/31/2004
 Time Sampled: 0833
 Date Received: 08/31/2004

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Color (A.P.H.A)	SM 2120 B	50	units	1	10	10	09/01/04 18:30	09/01/04 18:30
pH	SM 4500-H+ B	8.1	Std.Unit	-	1	N/A	09/01/04 21:02	09/01/04 21:02
Total Dissolved Solids (TDS)	SM 2540 C	210	mg/L	5	1	5	09/03/04	09/08/04
Turbidity	SM 2130 B	58	NTU	0.1	10	1.0	09/01/04 18:30	09/01/04 18:30

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 : PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Case Narrative for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code:

Page 4 of 4

10/14/2004

Stephen Clark
Pacific EcoRisk
835 Arnold Drive Suite 104
Martinez, CA 94553



Dear Stephen Clark,

Thank you for selecting BSK Analytical Laboratories for your analytical testing needs. We have prepared this report in response to your request for analytical services. Please find enclosed the following sections for your complete laboratory report, each uniquely paginated:

CASE NARRATIVE: An overview of the work performed.
CERTIFICATE OF ANALYSIS: Analytical results.
QUALITY CONTROL (QC) SUMMARY: QC supporting the results presented herein.
REPORT OF SAMPLE INTEGRITY
CHAIN OF CUSTODY FORM

Certification: I certify that this data package is in compliance with NELAC Standards for applicable analyses under NELAP Certificate #04227CA, and is in compliance with ELAP Standards for applicable certified analyses under ELAP Certificate #1180, except for the conditions listed.

If additional clarification of any information is required, please contact your Client Services Representative, Glen Brown, at (800) 877-8310 or (559) 497-2888.

BSK ANALYTICAL LABORATORIES

Glen Brown
Client Services Representative

Cynthia Hamilton
Quality Assurance Specialist



BSK ANALYTICAL LABORATORIES

Stephen Clark
 Pacific EcoRisk
 835 Arnold Drive Suite 104
 Martinez, CA 94553

Certificate of Analysis
 NELAP Certificate #04227CA
 ELAP Certificate #1180



Report Issue Date: 10/14/2004

BSK Submission #: 2004092146

BSK Sample ID #: 502481

Project ID:

Project Desc: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid
 Sample Description: 03-ARDCL-004
 Sample Comments:

Date Sampled: 09/29/2004
 Time Sampled: 1528
 Date Received: 09/30/2004

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Color (A.P.H.A)	SM 2120 B	75	units	1	5	5	09/30/04 17:10	09/30/04 17:10
pH	SM 4500-H+ B	9.0	Std.Unit	-	1	N/A	09/30/04 14:23	09/30/04 14:23
Total Dissolved Solids (TDS)	SM 2540 C	730	mg/L	5	1	5	10/04/04	10/06/04
Turbidity	SM 2130 B	20	NTU	0.1	5	0.5	09/30/04 17:10	09/30/04 17:10

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 ; PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Case Narrative for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code:



Page 1 of 8

BSK ANALYTICAL LABORATORIES

Stephen Clark
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Certificate of Analysis
 NELAP Certificate #04227CA
 ELAP Certificate #1180



Report Issue Date: 10/14/2004

BSK Submission #: 2004092146

BSK Sample ID #: 502482

Project ID:

Project Desc: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid
 Sample Description: 03-MRSFD-010
 Sample Comments:

Date Sampled: 09/29/2004
 Time Sampled: 1345
 Date Received: 09/30/2004

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Color (A.P.H.A)	SM 2120 B	10	units	1	1	1	09/30/04 17:13	09/30/04 17:13
pH	SM 4500-H+ B	7.6	Std.Unit	-	1	N/A	09/30/04 14:27	09/30/04 14:27
Total Dissolved Solids (TDS)	SM 2540 C	46	mg/L	5	1	5	10/04/04	10/06/04
Turbidity	SM 2130 B	1.7	NTU	0.1	1	0.1	09/30/04 17:13	09/30/04 17:13

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 : PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Case Narrative for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code: 

Page 2 of 8

BSK ANALYTICAL LABORATORIES

Stephen Clark
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Certificate of Analysis
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 ELAP Certificate #1180



Report Issue Date: 10/14/2004

BSK Submission #: 2004092146

BSK Sample ID #: 502483

Project ID:

Project Desc: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid

Date Sampled: 09/29/2004

Sample Description: 03-DSAGR-016

Time Sampled: 1003

Sample Comments:

Date Received: 09/30/2004

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Color (A.P.H.A)	SM 2120 B	150	units	1	10	10	09/30/04 17:19	09/30/04 17:19
pH	SM 4500-H+ B	7.9	Std.Unit	-	1	N/A	09/30/04 14:32	09/30/04 14:32
Total Dissolved Solids (TDS)	SM 2540 C	540	mg/L	5	1	5	10/04/04	10/06/04
Turbidity	SM 2130 B	78	NTU	0.1	10	1.0	09/30/04 17:19	09/30/04 17:19

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 : PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Case Narrative for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code:



Page 3 of 8

BSK ANALYTICAL LABORATORIES

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Report Issue Date: 10/14/2004

BSK Submission #: 2004092146

BSK Sample ID #: 502484

Project ID:

Project Desc: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid

Date Sampled: 09/29/2004

Sample Description: 03-DCAGR-022

Time Sampled: 0858

Sample Comments:

Date Received: 09/30/2004

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Color (A.P.H.A)	SM 2120 B	100	units	1	10	10	09/30/04 17:22	09/30/04 17:22
pH	SM 4500-H+ B	8.3	Std.Unit	-	1	N/A	09/30/04 14:35	09/30/04 14:35
Total Dissolved Solids (TDS)	SM 2540 C	370	mg/L	5	1	5	10/04/04	10/06/04
Turbidity	SM 2130 B	64	NTU	0.1	10	1.0	09/30/04 17:22	09/30/04 17:22

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 ; PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Case Narrative for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code: 

BSK ANALYTICAL LABORATORIES

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Certificate of Analysis
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 ELAP Certificate #1180



BSK Submission #: 2004080002

BSK Sample ID #: 477518

Project ID:

Project Desc: East San Joaquin River Watershed Coalition

Report Issue Date: 08/10/2004

Submission Comments:

Sample Type: **Liquid**
 Sample Description: **01-ARDCL-009**
 Sample Comments:

Date Sampled: 07/31/2004
 Time Sampled: 1607
 Date Received: 08/02/2004

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Total Organic Carbon (TOC)	SM 5310-C	12	mg/L	0.2	2	0.4	08/09/04	08/09/04

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 : PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Case Narrative for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code: 

Page 1 of 6

BSK ANALYTICAL LABORATORIES

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Report Issue Date: 08/10/2004

BSK Submission #: 2004080002

BSK Sample ID #: 477519

Project ID:

Project Desc: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid

Date Sampled: 07/31/2004

Sample Description: 01-MRSFD-015

Time Sampled: 1442

Sample Comments:

Date Received: 08/02/2004

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Total Organic Carbon (TOC)	SM 5310-C	2.6	mg/L	0.2	1	0.2	08/06/04	08/06/04

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 : PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result, See Case Narrative for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code:

Page 2 of 6

BSK ANALYTICAL LABORATORIES

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Report Issue Date: 08/10/2004

BSK Submission #: 2004080002

BSK Sample ID #: 477520

Project ID:

Project Desc: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid
 Sample Description: 01-DSAGR-024
 Sample Comments:

Date Sampled: 07/31/2004
 Time Sampled: 1200
 Date Received: 08/02/2004

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Total Organic Carbon (TOC)	SM 5310-C	ND	mg/L	0.2	1	0.2	08/09/04	08/09/04

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 ; PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Case Narrative for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code:

Page 3 of 6

BSK ANALYTICAL LABORATORIES

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Report Issue Date: 08/10/2004

BSK Submission #: 2004080002

BSK Sample ID #: 477521

Project ID:

Project Desc: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid
 Sample Description: 01-DSAGR-025
 Sample Comments:

Date Sampled: 07/31/2004
 Time Sampled: 1201
 Date Received: 08/02/2004

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Total Organic Carbon (TOC)	SM 5310-C	8.7	mg/L	0.2	5	1.0	08/06/04	08/06/04

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 : PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Case Narrative for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code: 

Page 4 of 6

BSK ANALYTICAL LABORATORIES

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 Martinez, CA 94553

Certificate of Analysis
 NELAP Certificate #04227CA
 ELAP Certificate #1180



Report Issue Date: 08/10/2004

BSK Submission #: 2004080002

BSK Sample ID #: 477522

Project ID:

Project Desc: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid
 Sample Description: 01-DSAGR-026
 Sample Comments: sample used for MS/MSD

Date Sampled: 07/31/2004
 Time Sampled: 1202
 Date Received: 08/02/2004

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Total Organic Carbon (TOC)	SM 5310-C	9.6	mg/L	0.2	5	1.0	08/06/04	08/06/04

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 : PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Case Narrative for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code: 

Page 5 of 6

BSK ANALYTICAL LABORATORIES

Certificate of Analysis
 NELAP Certificate #04227CA
 ELAP Certificate #1180

Stephen Clark
 Pacific EcoRisk
 835 Arnold Drive Suite 104
 Martinez, CA 94553



Report Issue Date: 08/10/2004

BSK Submission #: 2004080002

BSK Sample ID #: 477523

Project ID:

Project Desc: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid
 Sample Description: 01-DCAGR-038
 Sample Comments:

Date Sampled: 07/31/2004
 Time Sampled: 1052
 Date Received: 08/02/2004

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Total Organic Carbon (TOC)	SM 5310-C	4.5	mg/L	0.2	5	1.0	08/06/04	08/06/04

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 ; PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Case Narrative for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code:



Page 6 of 6

09/06/2004

Stephen Clark
Pacific EcoRisk
835 Arnold Drive Suite 104
Martinez, CA 94553



Dear Stephen Clark,

Thank you for selecting BSK Analytical Laboratories for your analytical testing needs. We have prepared this report in response to your request for analytical services. Please find enclosed the following sections for your complete laboratory report, each uniquely paginated:

CASE NARRATIVE: An overview of the work performed.
CERTIFICATE OF ANALYSIS: Analytical results.
QUALITY CONTROL (QC) SUMMARY: QC supporting the results presented herein.
REPORT OF SAMPLE INTEGRITY
CHAIN OF CUSTODY FORM

Certification: I certify that this data package is in compliance with NELAC Standards for applicable analyses under NELAP Certificate #04227CA, and is in compliance with ELAP Standards for applicable certified analyses under ELAP Certificate #1180, except for the conditions listed.

If additional clarification of any information is required, please contact your Client Services Representative, Glen Brown, at (800) 877-8310 or (559) 497-2888.

BSK ANALYTICAL LABORATORIES

Glen Brown
Client Services Representative

Cynthia Hamilton
Quality Assurance Specialist



BSK ANALYTICAL LABORATORIES

Stephen Clark
 Pacific EcoRisk
 835 Arnold Drive Suite 104
 Martinez, CA 94553

Certificate of Analysis
 NELAP Certificate #04227CA
 ELAP Certificate #1180



Report Issue Date: 09/06/2004

BSK Submission #: 2004090109

BSK Sample ID #: 491273

Project ID:

Project Desc: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid

Date Sampled: 08/31/2004

Sample Description: 02-MRSFD-011

Time Sampled: 1503

Sample Comments:

Date Received: 08/31/2004

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Total Organic Carbon (TOC)	SM 5310-C	2.6	mg/L	0.2	1	0.2	09/02/04	09/02/04

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 : PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Case Narrative for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code: 

BSK ANALYTICAL LABORATORIES

Certificate of Analysis
 NELAP Certificate #04227CA
 ELAP Certificate #1180

Stephen Clark
 Pacific EcoRisk
 835 Arnold Drive Suite 104
 Martinez, CA 94553



Report Issue Date: 09/06/2004

BSK Submission #: 2004090109

BSK Sample ID #: 491274

Project ID:

Project Desc: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid

Date Sampled: 08/31/2004

Sample Description: 02-DSAGR-018

Time Sampled: 1203

Sample Comments:

Date Received: 08/31/2004

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Total Organic Carbon (TOC)	SM 5310-C	9.5	mg/L	0.2	2	0.4	09/02/04	09/02/04

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 ; PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Case Narrative for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code: 

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BSK ANALYTICAL LABORATORIES

Stephen Clark
 Pacific EcoRisk
 835 Arnold Drive Suite 104
 Martinez, CA 94553

Certificate of Analysis
 NELAP Certificate #04227CA
 ELAP Certificate #1180



Report Issue Date: 09/06/2004

BSK Submission #: 2004090109

BSK Sample ID #: 491275

Project ID:

Project Desc: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid

Date Sampled: 08/31/2004

Sample Description: 02-DCAGR-026

Time Sampled: 0832

Sample Comments:

Date Received: 08/31/2004

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Total Organic Carbon (TOC)	SM 5310-C	4.3	mg/L	0.2	2	0.4	09/02/04	09/02/04

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 : PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Case Narrative for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code: 

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BSK ANALYTICAL LABORATORIES

Stephen Clark
 Pacific EcoRisk
 835 Arnold Drive Suite 104
 Martinez, CA 94553

Certificate of Analysis
 NELAP Certificate #04227CA
 ELAP Certificate #1180



Report Issue Date: 10/14/2004

BSK Submission #: 2004092146

BSK Sample ID #: 502488

Project ID:

Project Desc: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid

Date Sampled: 09/29/2004

Sample Description: 03-DCAGR-021

Time Sampled: 0857

Sample Comments:

Date Received: 09/30/2004

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Total Organic Carbon (TOC)	SM 5310-C	4.0	mg/L	0.2	1	0.2	10/06/04	10/06/04

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 : PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Case Narrative for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code: 

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BSK ANALYTICAL LABORATORIES

Stephen Clark
 Pacific EcoRisk
 835 Arnold Drive Suite 104
 Martinez, CA 94553

Certificate of Analysis
 NELAP Certificate #04227CA
 ELAP Certificate #1180



Report Issue Date: 10/14/2004

BSK Submission #: 2004092146

BSK Sample ID #: 502485

Project ID:

Project Desc: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid

Date Sampled: 09/29/2004

Sample Description: 03-ARDCL-003

Time Sampled: 1527

Sample Comments:

Date Received: 09/30/2004

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Total Organic Carbon (TOC)	SM 5310-C	9.9	mg/L	0.2	2	0.4	10/08/04	10/08/04

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 : PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Case Narrative for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code: 

BSK ANALYTICAL LABORATORIES

Stephen Clark
 Pacific EcoRisk
 835 Arnold Drive Suite 104
 Martinez, CA 94553

Certificate of Analysis
 NELAP Certificate #04227CA
 ELAP Certificate #1180



Report Issue Date: 10/14/2004

BSK Submission #: 2004092146

BSK Sample ID #: 502486

Project ID:

Project Desc: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid

Date Sampled: 09/29/2004

Sample Description: 03-MRSFD-009

Time Sampled: 1346

Sample Comments:

Date Received: 09/30/2004

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Total Organic Carbon (TOC)	SM 5310-C	2.5	mg/L	0.2	1	0.2	10/06/04	10/06/04

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 : PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Case Narrative for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code: 

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1414 Stanislaus Street Fresno, CA 93706-1623 Phone 559-497-2888, In CA 800-877-8310 Fax 559-485-6935

BSK ANALYTICAL LABORATORIES

Stephen Clark
 Pacific EcoRisk
 835 Arnold Drive Suite 104
 Martinez, CA 94553

Certificate of Analysis
 NELAP Certificate #04227CA
 ELAP Certificate #1180



Report Issue Date: 10/14/2004

BSK Submission #: 2004092146

BSK Sample ID #: 502487

Project ID:

Project Desc: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid

Date Sampled: 09/29/2004

Sample Description: 03-DSAGR-015

Time Sampled: 1002

Sample Comments:

Date Received: 09/30/2004

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Total Organic Carbon (TOC)	SM 5310-C	5.7	mg/L	0.2	1	0.2	10/06/04	10/06/04

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 : PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Case Narrative for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code: 

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BSK ANALYTICAL LABORATORIES

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 08/09/2004

Stephen Clark
Pacific EcoRisk
835 Arnold Drive Suite 104
Martinez, CA 94553

BSK Submission #: 2004080245

BSK Sample ID #: 478895

Project ID / Desc.: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid
Sample Description: 01-ARDCL-008
Bacteriological Lab ID: 52701
Bacteriological Type: Other
Report Comment:
Residual Chlorine (mg/L): N/A

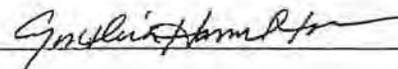
Field Turbidity (NTU): N/A

Date Sampled: 07/31/2004
Time Sampled: 1606
Date Received: 07/31/2004

Sampled by: CLIENT

Analyte	Method	Result	Units	DLR	Dilution	PQL	Innoculation	
							Date:Time	Run No.:77002
E. coli (3x5 MTF)	SM 9221-B/F	300	MPN/100mL	2	i	2	07/31/2004 @ 18:40	

Approved by: _____



MPN: Most Probable Number
CFU: Colony Forming Unit
Absent: Less than 1 CFU/100mLs
Present: 1 or more CFU/100mLs

DLR: detection limit for reporting
PQL: practical quantitation limit
ND: none detected at PQL
P: preliminary result
S: suspect result. See Cover Letter for comments

Page 1 of 6



BSK ANALYTICAL LABORATORIES

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 08/09/2004

Stephen Clark
Pacific EcoRisk
835 Arnold Drive Suite 104
Martinez, CA 94553

BSK Submission #: 2004080245

BSK Sample ID #: 478896

Project ID / Desc.: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid

Sample Description: 01-MRSFD-014

Bacteriological Lab ID: 52702

Bacteriological Type: Other

Report Comment:

Residual Chlorine (mg/L): N/A

Field Turbidity (NTU): N/A

Date Sampled: 07/31/2004

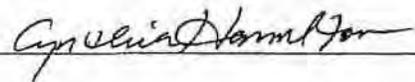
Time Sampled: 1444

Date Received: 07/31/2004

Sampled by: CLIENT

Analyte	Method	Result	Units	DLR	Dilution	PQL	Innoculation	
							Date:Time	Run No.:77002
E. coli (3x5 MTF)	SM 9221-B/F	80	MPN/100mL	2	1	2	07/31/2004 @ 18:40	

Approved by: _____



MPN: Most Probable Number
CFU: Colony Forming Unit
Absent: Less than 1 CFU/100mLs
Present: 1 or more CFU/100mLs

DLR: detection limit for reporting
PQL: practical quantitation limit
ND: none detected at PQL
P: preliminary result
S: suspect result. See Cover Letter for comments

Page 2 of 6



BSK ANALYTICAL LABORATORIES

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 08/09/2004

Stephen Clark
Pacific EcoRisk
835 Arnold Drive Suite 104
Martinez, CA 94553

BSK Submission #: 2004080245

BSK Sample ID #: 478897

Project ID / Desc.: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid

Sample Description: 01-DSAGR-021-FB

Bacteriological Lab ID: 52703

Bacteriological Type: Other

Report Comment:

Residual Chlorine (mg/L): N/A

Field Turbidity (NTU): N/A

Date Sampled: 07/31/2004

Time Sampled: 1203

Date Received: 07/31/2004

Sampled by: CLIENT

Analyte	Method	Result	Units	DLR	Dilution	PQL	Innoculation	
							Date:Time	Run No.:77002
E. coli (3x5 MTF)	SM 9221-B/F	<2	MPN/100mL	2	1	2	07/31/2004 @ 18:40	

Approved by: _____

MPN: Most Probable Number

CFU: Colony Forming Unit

Absent: Less than 1 CFU/100mLs

Present: 1 or more CFU/100mLs

DLR: detection limit for reporting

PQL: practical quantitation limit

ND: none detected at PQL

P: preliminary result

S: suspect result. See Cover Letter for comments

Page 3 of 6



BSK ANALYTICAL LABORATORIES

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 08/09/2004

Stephen Clark
Pacific EcoRisk
835 Arnold Drive Suite 104
Martinez, CA 94553

BSK Submission #: 2004080245

BSK Sample ID #: 478898

Project ID / Desc.: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid

Sample Description: 01-DSAGR-022-FD

Bacteriological Lab ID: 52704

Bacteriological Type: Other

Report Comment:

Residual Chlorine (mg/L): N/A

Field Turbidity (NTU): N/A

Date Sampled: 07/31/2004

Time Sampled: 1204

Date Received: 07/31/2004

Sampled by: CLIENT

Analyte	Method	Result	Units	DLR	Dilution	PQL	Innoculation	
							Date:Time	Run No.:77002
E. coli (3x5 MTF)	SM 9221-B/F	350	MPN/100mL	2	1	2	07/31/2004 @ 18:40	

Approved by: *Gynethia J. Summitt*

MPN: Most Probable Number
CFU: Colony Forming Unit
Absent: Less than 1 CFU/100mLs
Present: 1 or more CFU/100mLs

DLR: detection limit for reporting
PQL: practical quantitation limit
ND: none detected at PQL
P: preliminary result
S: suspect result. See Cover Letter for comments

Page 4 of 6



BSK ANALYTICAL LABORATORIES

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 08/09/2004

Stephen Clark
Pacific EcoRisk
835 Arnold Drive Suite 104
Martinez, CA 94553

BSK Submission #: 2004080245

BSK Sample ID #: 478899

Project ID / Desc.: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid

Sample Description: 01-DSAGR-023

Bacteriological Lab ID: 52705

Bacteriological Type: Other

Report Comment:

Residual Chlorine (mg/L): N/A

Field Turbidity (NTU): N/A

Date Sampled: 07/31/2004

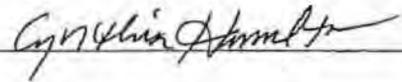
Time Sampled: 1205

Date Received: 07/31/2004

Sampled by: CLIENT

Analyte	Method	Result	Units	DLR	Dilution	PQL	Innoculation	
							Date:Time	Run No.:77002
E. coli (3x5 MTF)	SM 9221-B/F	350	MPN/100mL	2	1	2	07/31/2004 @ 18:40	

Approved by: _____



MPN: Most Probable Number

CFU: Colony Forming Unit

Absent: Less than 1 CFU/100mLs

Present: 1 or more CFU/100mLs

DLR: detection limit for reporting

PQL: practical quantitation limit

ND: none detected at PQL

P: preliminary result

S: suspect result. See Cover Letter for comments

Page 5 of 6



BSK ANALYTICAL LABORATORIES

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 08/09/2004

Stephen Clark
Pacific EcoRisk
835 Arnold Drive Suite 104
Martinez, CA 94553

BSK Submission #: 2004080245

BSK Sample ID #: 478900

Project ID / Desc.: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid
Sample Description: 01-DSAGR-037
Bacteriological Lab ID: 52706
Bacteriological Type: Other
Report Comment:
Residual Chlorine (mg/L): N/A

Field Turbidity (NTU): N/A

Date Sampled: 07/31/2004
Time Sampled: 1051
Date Received: 07/31/2004

Sampled by: CLIENT

Analyte	Method	Result	Units	DLR	Dilution	PQL	Innoculation	Run No.:77002
							Date:Time	
E. coli (3x5 MTF)	SM 9221-B/F	1600	MPN/100mL	2	1	2	07/31/2004 @ 18:40	

Approved by: _____



MPN: Most Probable Number
CFU: Colony Forming Unit
Absent: Less than 1 CFU/100mLs
Present: 1 or more CFU/100mLs

DLR: detection limit for reporting
PQL: practical quantitation limit
ND: none detected at PQL
P: preliminary result
S: suspect result. See Cover Letter for comments

Page 6 of 6



BSK ANALYTICAL LABORATORIES

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 09/08/2004

Stephen Clark
Pacific EcoRisk
835 Arnold Drive Suite 104
Martinez, CA 94553

BSK Submission #: 2004090036
BSK Sample ID #: 490990

Project ID / Desc.: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid
Sample Description: 02-ARDCL-003
Bacteriological Lab ID: 54344
Bacteriological Type:
Report Comment:
Residual Chlorine (mg/L): N/A

Field Turbidity (NTU): N/A

Date Sampled: 08/31/2004
Time Sampled: 1707
Date Received: 08/31/2004

Sampled by: CLIENT

Analyte	Method	Result	Units	DLR	Dilution	PQL	Innoculation	
							Date:Time	Run No.:
E. coli (3x5 MTF)	SM 9221-B/F	300	MPN/100mL	2	1	2	08/31/2004 @ 19:40	79038

Approved by: _____

Gynthia Hamilton

MPN: Most Probable Number
CFU: Colony Forming Unit
Absent: Less than 1 CFU/100mLs
Present: 1 or more CFU/100mLs

DLR: detection limit for reporting
PQL: practical quantitation limit
ND: none detected at PQL
P: preliminary result
S: suspect result. See Cover Letter for comments

Page 1 of 4



BSK ANALYTICAL LABORATORIES

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 09/08/2004

Stephen Clark
Pacific EcoRisk
835 Arnold Drive Suite 104
Martinez, CA 94553

BSK Submission #: 2004090036

BSK Sample ID #: 490991

Project ID / Desc.: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid

Sample Description: 02-MRSFD-010

Bacteriological Lab ID: 54345

Bacteriological Type:

Report Comment:

Residual Chlorine (mg/L): N/A

Field Turbidity (NTU): N/A

Date Sampled: 08/31/2004

Time Sampled: 1502

Date Received: 08/31/2004

Sampled by: CLIENT

Analyte	Method	Result	Units	DLR	Dilution	PQL	Innoculation	
							Date:Time	Run No.:79038
E. coli (3x5 MTF)	SM 9221-B/F	110	MPN/100mL	2	1	2	08/31/2004 @ 19:40	

Approved by: 

MPN: Most Probable Number

CFU: Colony Forming Unit

Absent: Less than 1 CFU/100mLs

Present: 1 or more CFU/100mLs

DLR: detection limit for reporting

PQL: practical quantitation limit

ND: none detected at PQL

P: preliminary result

S: suspect result. See Cover Letter for comments

Page 2 of 4



BSK ANALYTICAL LABORATORIES

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 09/08/2004

Stephen Clark
Pacific EcoRisk
835 Arnold Drive Suite 104
Martinez, CA 94553

BSK Submission #: 2004090036

BSK Sample ID #: 490992

Project ID / Desc.: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid

Sample Description: 02-DSAGR-017

Bacteriological Lab ID: 54346

Bacteriological Type:

Report Comment:

Residual Chlorine (mg/L): N/A

Field Turbidity (NTU): N/A

Date Sampled: 08/31/2004

Time Sampled: 1202

Date Received: 08/31/2004

Sampled by: CLIENT

Analyte	Method	Result	Units	DLR	Dilution	PQL	Innoculation	
							Date:Time	Run No.:79038
E. coli (3x5 MTF)	SM 9221-B/F	30	MPN/100mL	2	1	2	08/31/2004 @ 19:40	

Approved by: _____



MPN: Most Probable Number

CFU: Colony Forming Unit

Absent: Less than 1 CFU/100mLs

Present: 1 or more CFU/100mLs

DLR: detection limit for reporting

PQL: practical quantitation limit

ND: none detected at PQL

P: preliminary result

S: suspect result. See Cover Letter for comments

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BSK ANALYTICAL LABORATORIES

Certificate of Analysis

ELAP Certificate #1180

Report Issue Date: 09/08/2004

Stephen Clark
Pacific EcoRisk
835 Arnold Drive Suite 104
Martinez, CA 94553

BSK Submission #: 2004090036

BSK Sample ID #: 490993

Project ID / Desc.: East San Joaquin River Watershed Coalition

Submission Comments:

Sample Type: Liquid

Sample Description: 02-DCAGR-025

Bacteriological Lab ID: 54347

Bacteriological Type:

Report Comment:

Residual Chlorine (mg/L): N/A

Field Turbidity (NTU): N/A

Date Sampled: 08/31/2004

Time Sampled: 0831

Date Received: 08/31/2004

Sampled by: CLIENT

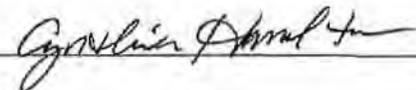
Analyte	Method	Result	Units	DLR	Dilution	PQL	Innoculation	
							Date:Time	Run No.:79038
E. coli (3x5 MTF)	SM 9221-B/F	1600	MPN/100mL	2	1	2	08/31/2004 @ 19:40	

Sample Comments

490993 SM 9221-B/F

Sample received out of holding time.

Approved by: _____



MPN: Most Probable Number
CFU: Colony Forming Unit
Absent: Less than 1 CFU/100mLs
Present: 1 or more CFU/100mLs

DLR: detection limit for reporting
PQL: practical quantitation limit
ND: none detected at PQL
P: preliminary result
S: suspect result. See Cover Letter for comments

Page 4 of 4



Missing
9/29 California



August 23, 2004

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, California 94553

Attn: Stephen Clark

Subject: Report of Data: Case 45039

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Dear Mr. Clark:

Twelve water samples for Project "East San Joaquin River Watershed" were received August 2, 2004, in good condition. Written results are being provided on this August 23, 2004, for the requested analyses. All holding times were met.

For the EPA 8081A analysis, the samples were extracted according to EPA method 3510C.

For the EPA 8141A analysis, the samples were extracted according to EPA method 3510C. For the MS/MSD, Naled and Trichloronate recovered slightly above their upper control limits. Both analytes had acceptable recoveries in the lab control spike and no further action was taken. The sample data generated are acceptable.

No other unusual problems or complications were encountered with this sample set.

If you have any questions or require further information, please contact us at your convenience. Thank you for choosing APPL, Inc.

Sincerely,

Leonard Fong, Ph.D., Laboratory Director
APPL, Inc.

LF/rp
Enclosure
cc: File

Number of pages in this report 27

EPA 8081A Pyrethroids WATER

ific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attr: Stephen Clark
Project: EAST SAN JOAQUIN RIVER WATERSHED COALIT

ARF: 45039
APPL ID: AP73369
QCG: \$81PY-040804A-78222

Sample ID: 01-ARDCL-011

Sample Collection Date: 7/31/04

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8081A	Bifenthrin	Not detected	0.02	0.006	ug/L	8/4/04	8/5/04
EPA 8081A	Cyfluthrin	Not detected	0.03	0.003	ug/L	8/4/04	8/5/04
EPA 8081A	Cypermethrin	Not detected	0.10	0.004	ug/L	8/4/04	8/5/04
EPA 8081A	Esfenvalerate/Fenvalerate	Not detected	0.02	0.002	ug/L	8/4/04	8/5/04
EPA 8081A	Lambda cyhalothrin	Not detected	0.02	0.001	ug/L	8/4/04	8/5/04
EPA 8081A	Permethrin	Not detected	0.02	0.009	ug/L	8/4/04	8/5/04
EPA 8081A	Surrogate: DECA	66.0	25-143		%	8/4/04	8/5/04
EPA 8081A	Surrogate: TCmX	50.7	25-144		%	8/4/04	8/5/04

Run #: 63
Instrument: LUCY
Sequence: 040804
Dilution Factor: 1
Initials: SA

Printed: 8/10/04 1:58:25 PM
APPL-F1-SC-MCRes/MCPQL

EPA 8081A Pyrethroids WATER

Ecologic EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark

Project: EAST SAN JOAQUIN RIVER WATERSHED COALIT

ARF: 45039

Sample ID: 01-MRSFD-017

APPL ID: AP73370

Sample Collection Date: 7/31/04

QCG: \$81PY-040804A-78222

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8081A	Bifenthrin	Not detected	0.02	0.006	ug/L	8/4/04	8/5/04
EPA 8081A	Cyfluthrin	Not detected	0.03	0.003	ug/L	8/4/04	8/5/04
EPA 8081A	Cypermethrin	Not detected	0.10	0.004	ug/L	8/4/04	8/5/04
EPA 8081A	Esfenvalerate/Fenvalerate	Not detected	0.02	0.002	ug/L	8/4/04	8/5/04
EPA 8081A	Lambda cyhalothrin	Not detected	0.02	0.001	ug/L	8/4/04	8/5/04
EPA 8081A	Permethrin	Not detected	0.02	0.009	ug/L	8/4/04	8/5/04
EPA 8081A	Surrogate: DECA	69.2	25-143		%	8/4/04	8/5/04
EPA 8081A	Surrogate: TCmX	50.9	25-144		%	8/4/04	8/5/04

Run #: 64
Instrument: LUCY
Sequence: 040804
Dilution Factor: 1
Initials: SA

Printed: 8/10/04 1:58:25 PM
APPL-F1-SC-MCRes/MCPQL

EPA 8081A Pyrethroids WATER

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark

Project: EAST SAN JOAQUIN RIVER WATERSHED COALIT

ARF: 45039

Sample ID: 01-DSAGR-030

APPL ID: AP73371

Sample Collection Date: 7/31/04

QCG: \$81PY-040804A-78222

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8081A	Bifenthrin	Not detected	0.02	0.006	ug/L	8/4/04	8/5/04
EPA 8081A	Cyfluthrin	Not detected	0.03	0.003	ug/L	8/4/04	8/5/04
EPA 8081A	Cypermethrin	Not detected	0.10	0.004	ug/L	8/4/04	8/5/04
EPA 8081A	Esfenvalerate/Fenvalerate	Not detected	0.02	0.002	ug/L	8/4/04	8/5/04
EPA 8081A	Lambda cyhalothrin	Not detected	0.02	0.001	ug/L	8/4/04	8/5/04
EPA 8081A	Permethrin	Not detected	0.02	0.009	ug/L	8/4/04	8/5/04
EPA 8081A	Surrogate: DECA	67.6	25-143		%	8/4/04	8/5/04
EPA 8081A	Surrogate: TCmX	48.5	25-144		%	8/4/04	8/5/04

Run #: 65 Instrument: LUCY Sequence: 040804 Dilution Factor: 1 Initials: SA

Printed: 8/10/04 1:58:26 PM
APPL-F1-SC-MCRes/MCPQL

EPA 8081A Pyrethroids WATER

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark

Project: EAST SAN JOAQUIN RIVER WATERSHED COALIT

Sample ID: 01-DSAGR-031

Sample Collection Date: 7/31/04

ARF: 45039

APPL ID: AP73372

QCG: \$81PY-040804A-78222

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8081A	Bifenthrin	Not detected	0.02	0.006	ug/L	8/4/04	8/5/04
EPA 8081A	Cyfluthrin	Not detected	0.03	0.003	ug/L	8/4/04	8/5/04
EPA 8081A	Cypermethrin	Not detected	0.10	0.004	ug/L	8/4/04	8/5/04
EPA 8081A	Esfenvalerate/Fenvalerate	Not detected	0.02	0.002	ug/L	8/4/04	8/5/04
EPA 8081A	Lambda cyhalothrin	Not detected	0.02	0.001	ug/L	8/4/04	8/5/04
EPA 8081A	Permethrin	Not detected	0.02	0.009	ug/L	8/4/04	8/5/04
EPA 8081A	Surrogate: DECA	61.0	25-143		%	8/4/04	8/5/04
EPA 8081A	Surrogate: TCmX	40.3	25-144		%	8/4/04	8/5/04

Run #: 66
Instrument: LUCY
Sequence: 040804
Dilution Factor: 1
Initials: SA

Printed: 8/10/04 1:58:26 PM
APPL-F1-SC-MCRes/MCPQL

EPA 8141A OP Pesticide Water

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

Attn: Stephen Clark
Project: EAST SAN JOAQUIN RIVER WATERSHED COALIT
Sample ID: 01-ARDCL-012
Sample Collection Date: 7/31/04

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 45039
APPL ID: AP73362
QCG: \$84AG-040803A-78357

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8141A	Surrogate: Triphenylphosphate	85.3	56-129		%	8/3/04	8/20/04

Run #: 24,17
Instrument: NPD04,03
Sequence: 040819,12
Dilution Factor: 1
Initials: SS

Printed: 8/20/04 12:22:43 PM
APPL-F1-SC-MCRes/MCPQL

EPA 8081A Pyrethroids WATER

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark

Project: EAST SAN JOAQUIN RIVER WATERSHED COALIT

AR#: 45039

Sample ID: 01-DSAGR-032

APPL ID: AP73373

Sample Collection Date: 7/31/04

QCG: \$81PY-040804A-78222

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8081A	Bifenthrin	Not detected	0.02	0.006	ug/L	8/4/04	8/5/04
EPA 8081A	Cyfluthrin	Not detected	0.03	0.003	ug/L	8/4/04	8/5/04
EPA 8081A	Cypermethrin	Not detected	0.10	0.004	ug/L	8/4/04	8/5/04
EPA 8081A	Esfenvalerate/Fenvalerate	Not detected	0.02	0.002	ug/L	8/4/04	8/5/04
EPA 8081A	Lambda cyhalothrin	Not detected	0.02	0.001	ug/L	8/4/04	8/5/04
EPA 8081A	Permethrin	Not detected	0.02	0.009	ug/L	8/4/04	8/5/04
EPA 8081A	Surrogate: DECA	62.9	25-143		%	8/4/04	8/5/04
EPA 8081A	Surrogate: TCmX	48.8	25-144		%	8/4/04	8/5/04

Run #: 67
Instrument: LUCY
Sequence: 040804
Dilution Factor: 1
Initials: SA

EPA 8081A Pyrethroids WATER

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark

Project: EAST SAN JOAQUIN RIVER WATERSHED COALIT

ARF: 45039

Sample ID: 01-DCAGR-040

APPL ID: AP73374

Sample Collection Date: 7/31/04

QCG: \$81PY-040804A-78222

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8081A	Bifenthrin	Not detected	0.02	0.006	ug/L	8/4/04	8/5/04
EPA 8081A	Cyfluthrin	Not detected	0.03	0.003	ug/L	8/4/04	8/5/04
EPA 8081A	Cypermethrin	Not detected	0.10	0.004	ug/L	8/4/04	8/5/04
EPA 8081A	Esfenvalerate/Fenvalerate	Not detected	0.02	0.002	ug/L	8/4/04	8/5/04
EPA 8081A	Lambda cyhalothrin	Not detected	0.02	0.001	ug/L	8/4/04	8/5/04
EPA 8081A	Permethrin	Not detected	0.02	0.009	ug/L	8/4/04	8/5/04
EPA 8081A	Surrogate: DECA	60.6	25-143		%	8/4/04	8/5/04
EPA 8081A	Surrogate: TCmX	45.8	25-144		%	8/4/04	8/5/04

Run #: 68
Instrument: LUCY
Sequence: 040804
Dilution Factor: 1
Initials: SA

Printed: 8/10/04 1:58:26 PM
APPL-F1-SC-MCRes/MCPQL

EPA 8141A OP Pesticide Water

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark

Project: EAST SAN JOAQUIN RIVER WATERSHED COALIT

ARF: 45039

Sample ID: 01-ARDCL-012

APPL ID: AP73362

Sample Collection Date: 7/31/04

QCG: \$84AG-040803A-78357

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8141A	Azinphosmethyl	Not detected	1.0	0.488	ug/L	8/3/04	8/20/04
EPA 8141A	Bolstar	Not detected	0.10	0.0716	ug/L	8/3/04	8/20/04
EPA 8141A	Chlorpyrifos	Not detected	0.05	0.0254	ug/L	8/3/04	8/20/04
EPA 8141A	Coumaphos	Not detected	0.20	0.13	ug/L	8/3/04	8/20/04
EPA 8141A	Def	Not detected	0.10	0.084	ug/L	8/3/04	8/20/04
EPA 8141A	Demeton-S	Not detected	0.20	0.01	ug/L	8/3/04	8/20/04
EPA 8141A	Diazinon	Not detected	0.05	0.0282	ug/L	8/3/04	8/20/04
EPA 8141A	Dichlorvos	Not detected	0.20	0.02	ug/L	8/3/04	8/20/04
EPA 8141A	Dimethoate	0.31	0.10	0.08	ug/L	8/3/04	8/20/04
EPA 8141A	Disulfoton	Not detected	0.10	0.02	ug/L	8/3/04	8/20/04
EPA 8141A	EPN	Not detected	0.10	0.03	ug/L	8/3/04	8/20/04
EPA 8141A	EPTC	Not detected	0.10	0.03	ug/L	8/3/04	8/20/04
EPA 8141A	Ethion	Not detected	0.10	0.03	ug/L	8/3/04	8/20/04
EPA 8141A	Ethoprop	Not detected	0.10	0.0235	ug/L	8/3/04	8/20/04
EPA 8141A	Fenamiphos	Not detected	1.0	0.1	ug/L	8/3/04	8/20/04
EPA 8141A	Fensulfothion	Not detected	0.50	0.16	ug/L	8/3/04	8/20/04
EPA 8141A	Fenthion	Not detected	0.10	0.02	ug/L	8/3/04	8/20/04
EPA 8141A	Malathion	Not detected	0.10	0.05	ug/L	8/3/04	8/20/04
EPA 8141A	Merphos	Not detected	0.10	0.06	ug/L	8/3/04	8/20/04
EPA 8141A	Mevinphos	Not detected	0.70	0.0716	ug/L	8/3/04	8/20/04
EPA 8141A	Naled	Not detected	0.50	0.271	ug/L	8/3/04	8/20/04
EPA 8141A	Parathion, ethyl	Not detected	0.10	0.02	ug/L	8/3/04	8/20/04
EPA 8141A	Parathion, methyl	Not detected	0.10	0.0755	ug/L	8/3/04	8/20/04
EPA 8141A	Phorate	Not detected	0.10	0.0722	ug/L	8/3/04	8/20/04
EPA 8141A	Prowl	Not detected	0.10	0.041	ug/L	8/3/04	8/20/04
EPA 8141A	Ronnel	Not detected	0.10	0.03	ug/L	8/3/04	8/20/04
EPA 8141A	Stirophos	Not detected	0.10	0.06	ug/L	8/3/04	8/20/04
EPA 8141A	Tokuthion	Not detected	0.10	0.0216	ug/L	8/3/04	8/20/04
EPA 8141A	Trichloronate	Not detected	0.10	0.05	ug/L	8/3/04	8/20/04
EPA 8141A	Trifluralin	Not detected	0.10	0.036	ug/L	8/3/04	8/20/04
EPA 8141A	Surrogate: Tributylphosphate	95.6	60-150		%	8/3/04	8/20/04

Run #: 24,17
Instrument: NPD04,03
Sequence: 040819,12
Dilution Factor: 1
Initials: SS

EPA 8141A OP Pesticide Water

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark
Project: EAST SAN JOAQUIN RIVER WATERSHED COALIT
Sample ID: 01-ARDCL-012
Sample Collection Date: 7/31/04

ARF: 45039
APPL ID: AP73362
QCG: \$84AG-040803A-78357

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8141A	Surrogate: Triphenylphosphate	85.3	56-129		%	8/3/04	8/20/04

Run #: 24,17 Instrument: NPD04,03 Sequence: 040819,12 Dilution Factor: 1 Initials: SS

Printed: 8/20/04 12:22:43 PM
APPL-F1-SC-MCRes/MCPQL

EPA 8141A OP Pesticide Water

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark

Project: EAST SAN JOAQUIN RIVER WATERSHED COALIT

ARF: 45039

Sample ID: 01-MRSFD-018

APPL ID: AP73363

Sample Collection Date: 7/31/04

QCG: \$84AG-040803A-78357

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8141A	Azinphosmethyl	Not detected	1.0	0.488	ug/L	8/3/04	8/12/04
EPA 8141A	Bolstar	Not detected	0.10	0.0716	ug/L	8/3/04	8/12/04
EPA 8141A	Chlorpyrifos	Not detected	0.05	0.0254	ug/L	8/3/04	8/12/04
EPA 8141A	Coumaphos	Not detected	0.20	0.13	ug/L	8/3/04	8/12/04
EPA 8141A	Def	Not detected	0.10	0.084	ug/L	8/3/04	8/12/04
EPA 8141A	Demeton-S	Not detected	0.20	0.01	ug/L	8/3/04	8/12/04
EPA 8141A	Diazinon	Not detected	0.05	0.0282	ug/L	8/3/04	8/12/04
EPA 8141A	Dichlorvos	Not detected	0.20	0.02	ug/L	8/3/04	8/12/04
EPA 8141A	Dimethoate	Not detected	0.10	0.08	ug/L	8/3/04	8/12/04
EPA 8141A	Disulfoton	Not detected	0.10	0.02	ug/L	8/3/04	8/12/04
EPA 8141A	EPN	Not detected	0.10	0.03	ug/L	8/3/04	8/12/04
EPA 8141A	EPTC	Not detected	0.10	0.03	ug/L	8/3/04	8/12/04
EPA 8141A	Ethion	Not detected	0.10	0.03	ug/L	8/3/04	8/12/04
EPA 8141A	Ethoprop	Not detected	0.10	0.0235	ug/L	8/3/04	8/12/04
EPA 8141A	Fenamiphos	Not detected	1.0	0.1	ug/L	8/3/04	8/12/04
EPA 8141A	Fensulfothion	Not detected	0.50	0.16	ug/L	8/3/04	8/12/04
EPA 8141A	Fenthion	Not detected	0.10	0.02	ug/L	8/3/04	8/12/04
EPA 8141A	Malathion	Not detected	0.10	0.05	ug/L	8/3/04	8/12/04
EPA 8141A	Merphos	Not detected	0.10	0.06	ug/L	8/3/04	8/12/04
EPA 8141A	Mevinphos	Not detected	0.70	0.0716	ug/L	8/3/04	8/12/04
EPA 8141A	Naled	Not detected	0.50	0.271	ug/L	8/3/04	8/12/04
EPA 8141A	Parathion, ethyl	Not detected	0.10	0.02	ug/L	8/3/04	8/12/04
EPA 8141A	Parathion, methyl	Not detected	0.10	0.0755	ug/L	8/3/04	8/12/04
EPA 8141A	Phorate	Not detected	0.10	0.0722	ug/L	8/3/04	8/12/04
EPA 8141A	Prowl	Not detected	0.10	0.041	ug/L	8/3/04	8/12/04
EPA 8141A	Ronnel	Not detected	0.10	0.03	ug/L	8/3/04	8/12/04
EPA 8141A	Stirophos	Not detected	0.10	0.06	ug/L	8/3/04	8/12/04
EPA 8141A	Tokuthion	Not detected	0.10	0.0216	ug/L	8/3/04	8/12/04
EPA 8141A	Trichloronate	Not detected	0.10	0.05	ug/L	8/3/04	8/12/04
EPA 8141A	Trifluralin	Not detected	0.10	0.036	ug/L	8/3/04	8/12/04
EPA 8141A	Surrogate: Tributylphosphate	87.7	60-150		%	8/3/04	8/12/04

Run #: 45,18
Instrument: NPD04,03
Sequence: 040811,12
Dilution Factor: 1
Initials: SS

Printed: 8/16/04 12:42:54 PM
APPL-F1-SC-MCRes/MCPQL

EPA 8141A OP Pesticide Water

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark

ARF: 45039

Project: EAST SAN JOAQUIN RIVER WATERSHED COALIT

APPL ID: AP73363

Sample ID: 01-MRSFD-018

QCG: \$84AG-040803A-78357

Sample Collection Date: 7/31/04

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8141A	Surrogate: Triphenylphosphate	79.3	56-129		%	8/3/04	8/12/04

Run #: 45,18
Instrument: NPD04,03
Sequence: 040811,12
Dilution Factor: 1
Initials: SS

Printed: 8/16/04 12:42:54 PM
APPL-F1-SC-MCRes/MCPQL

EPA 8141A OP Pesticide Water

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark

Project: EAST SAN JOAQUIN RIVER WATERSHED COALIT

ARF: 45039

Sample ID: 01-DSAGR-033

APPL ID: AP73364

Sample Collection Date: 7/31/04

QCG: \$84AG-040803A-78357

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8141A	Azinphosmethyl	Not detected	1.0	0.488	ug/L	8/3/04	8/12/04
EPA 8141A	Bolstar	Not detected	0.10	0.0716	ug/L	8/3/04	8/12/04
EPA 8141A	Chlorpyrifos	Not detected	0.05	0.0254	ug/L	8/3/04	8/12/04
EPA 8141A	Coumaphos	Not detected	0.20	0.13	ug/L	8/3/04	8/12/04
EPA 8141A	Def	Not detected	0.10	0.084	ug/L	8/3/04	8/12/04
EPA 8141A	Demeton-S	Not detected	0.20	0.01	ug/L	8/3/04	8/12/04
EPA 8141A	Diazinon	Not detected	0.05	0.0282	ug/L	8/3/04	8/12/04
EPA 8141A	Dichlorvos	Not detected	0.20	0.02	ug/L	8/3/04	8/12/04
EPA 8141A	Dimethoate	Not detected	0.10	0.08	ug/L	8/3/04	8/12/04
EPA 8141A	Disulfoton	Not detected	0.10	0.02	ug/L	8/3/04	8/12/04
EPA 8141A	EPN	Not detected	0.10	0.03	ug/L	8/3/04	8/12/04
EPA 8141A	EPTC	Not detected	0.10	0.03	ug/L	8/3/04	8/12/04
EPA 8141A	Ethion	Not detected	0.10	0.03	ug/L	8/3/04	8/12/04
EPA 8141A	Ethoprop	Not detected	0.10	0.0235	ug/L	8/3/04	8/12/04
EPA 8141A	Fenamiphos	Not detected	1.0	0.1	ug/L	8/3/04	8/12/04
EPA 8141A	Fensulfothion	Not detected	0.50	0.16	ug/L	8/3/04	8/12/04
EPA 8141A	Fenthion	Not detected	0.10	0.02	ug/L	8/3/04	8/12/04
EPA 8141A	Malathion	Not detected	0.10	0.05	ug/L	8/3/04	8/12/04
EPA 8141A	Merphos	Not detected	0.10	0.06	ug/L	8/3/04	8/12/04
EPA 8141A	Mevinphos	Not detected	0.70	0.0716	ug/L	8/3/04	8/12/04
EPA 8141A	Naled	Not detected	0.50	0.271	ug/L	8/3/04	8/12/04
EPA 8141A	Parathion, ethyl	Not detected	0.10	0.02	ug/L	8/3/04	8/12/04
EPA 8141A	Parathion, methyl	Not detected	0.10	0.0755	ug/L	8/3/04	8/12/04
EPA 8141A	Phorate	Not detected	0.10	0.0722	ug/L	8/3/04	8/12/04
EPA 8141A	Prowl	Not detected	0.10	0.041	ug/L	8/3/04	8/12/04
EPA 8141A	Ronnel	Not detected	0.10	0.03	ug/L	8/3/04	8/12/04
EPA 8141A	Stirophos	Not detected	0.10	0.06	ug/L	8/3/04	8/12/04
EPA 8141A	Tokuthion	Not detected	0.10	0.0216	ug/L	8/3/04	8/12/04
EPA 8141A	Trichloronate	Not detected	0.10	0.05	ug/L	8/3/04	8/12/04
EPA 8141A	Trifluralin	Not detected	0.10	0.036	ug/L	8/3/04	8/12/04
EPA 8141A	Surrogate: Tributylphosphate	97.6	60-150		%	8/3/04	8/12/04

Run #: 46,19
Instrument: NPD04,03
Sequence: 040811,12
Dilution Factor: 1
Initials: SS

Printed: 8/16/04 12:42:54 PM
APPL-F1-SC-MCRes/MCPQL

EPA 8141A OP Pesticide Water

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark
Project: EAST SAN JOAQUIN RIVER WATERSHED COALIT
Sample ID: 01-DSAGR-033
Sample Collection Date: 7/31/04

ARF: 45039
APPL ID: AP73364
QCG: \$84AG-040803A-78357

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8141A	Surrogate: Triphenylphosphate	95.0	56-129		%	8/3/04	8/12/04

Run #: 46,19 Instrument: NPD04,03 Sequence: 040811,12 Dilution Factor: 1 Initials: SS

Printed: 8/16/04 12:42:54 PM
APPL-F1-SC-MCRes/MCPQL

EPA 8141A OP Pesticide Water

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark

Project: EAST SAN JOAQUIN RIVER WATERSHED COALIT

ARF: 45039

Sample ID: 01-DSAGR-034

APPL ID: AP73365

Sample Collection Date: 7/31/04

QCG: \$84AG-040803A-78357

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8141A	Azinphosmethyl	Not detected	1.0	0.488	ug/L	8/3/04	8/12/04
EPA 8141A	Bolstar	Not detected	0.10	0.0716	ug/L	8/3/04	8/12/04
EPA 8141A	Chlorpyrifos	0.045 J	0.05	0.0254	ug/L	8/3/04	8/12/04
EPA 8141A	Coumaphos	Not detected	0.20	0.13	ug/L	8/3/04	8/12/04
EPA 8141A	Def	Not detected	0.10	0.084	ug/L	8/3/04	8/12/04
EPA 8141A	Demeton-S	Not detected	0.20	0.01	ug/L	8/3/04	8/12/04
EPA 8141A	Diazinon	Not detected	0.05	0.0282	ug/L	8/3/04	8/12/04
EPA 8141A	Dichlorvos	Not detected	0.20	0.02	ug/L	8/3/04	8/12/04
EPA 8141A	Dimethoate	Not detected	0.10	0.08	ug/L	8/3/04	8/12/04
EPA 8141A	Disulfoton	Not detected	0.10	0.02	ug/L	8/3/04	8/12/04
EPA 8141A	EPN	Not detected	0.10	0.03	ug/L	8/3/04	8/12/04
EPA 8141A	EPTC	Not detected	0.10	0.03	ug/L	8/3/04	8/12/04
EPA 8141A	Ethion	Not detected	0.10	0.03	ug/L	8/3/04	8/12/04
EPA 8141A	Ethoprop	Not detected	0.10	0.0235	ug/L	8/3/04	8/12/04
EPA 8141A	Fenamiphos	Not detected	1.0	0.1	ug/L	8/3/04	8/12/04
EPA 8141A	Fensulfothion	Not detected	0.50	0.16	ug/L	8/3/04	8/12/04
EPA 8141A	Fenthion	Not detected	0.10	0.02	ug/L	8/3/04	8/12/04
EPA 8141A	Malathion	Not detected	0.10	0.05	ug/L	8/3/04	8/12/04
EPA 8141A	Merphos	Not detected	0.10	0.06	ug/L	8/3/04	8/12/04
EPA 8141A	Mevinphos	Not detected	0.70	0.0716	ug/L	8/3/04	8/12/04
EPA 8141A	Naled	Not detected	0.50	0.271	ug/L	8/3/04	8/12/04
EPA 8141A	Parathion, ethyl	Not detected	0.10	0.02	ug/L	8/3/04	8/12/04
EPA 8141A	Parathion, methyl	Not detected	0.10	0.0755	ug/L	8/3/04	8/12/04
EPA 8141A	Phorate	Not detected	0.10	0.0722	ug/L	8/3/04	8/12/04
EPA 8141A	Prowl	Not detected	0.10	0.041	ug/L	8/3/04	8/12/04
EPA 8141A	Ronnel	Not detected	0.10	0.03	ug/L	8/3/04	8/12/04
EPA 8141A	Stirophos	Not detected	0.10	0.06	ug/L	8/3/04	8/12/04
EPA 8141A	Tokuthion	Not detected	0.10	0.0216	ug/L	8/3/04	8/12/04
EPA 8141A	Trichloronate	Not detected	0.10	0.05	ug/L	8/3/04	8/12/04
EPA 8141A	Trifluralin	0.34	0.10	0.036	ug/L	8/3/04	8/12/04
EPA 8141A	Surrogate: Tributylphosphate	62.4	60-150		%	8/3/04	8/12/04

J = Estimated value, below quantitation limit.

Run #: 32,20
Instrument: NPD04,03
Sequence: 040814,12
Dilution Factor: 1
Initials: SS

Printed: 8/16/04 12:42:54 PM
APPL-F1-SC-MCRes/MCPQL

EPA 8141A OP Pesticide Water

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark

Project: EAST SAN JOAQUIN RIVER WATERSHED COALIT

Sample ID: 01-DSAGR-034

Sample Collection Date: 7/31/04

ARF: 45039

APPL ID: AP73365

QCG: \$84AG-040803A-78357

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8141A	Surrogate: Triphenylphosphate	70.0	56-129		%	8/3/04	8/12/04

J = Estimated value, below quantitation limit.

Run #: 32,20
Instrument: NPD04,03
Sequence: 040814,12
Dilution Factor: 1
Initials: SS

Printed: 8/16/04 12:42:54 PM
APPL-F1-SC-MCRes/MCPQL

EPA 8141A OP Pesticide Water

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark

Project: EAST SAN JOAQUIN RIVER WATERSHED COALIT

ARF: 45039

Sample ID: 01-DSAGR-035

APPL ID: AP73366

Sample Collection Date: 7/31/04

QCG: \$84AG-040803A-78357

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8141A	Azinphosmethyl	Not detected	1.0	0.488	ug/L	8/3/04	8/12/04
EPA 8141A	Bolstar	Not detected	0.10	0.0716	ug/L	8/3/04	8/12/04
EPA 8141A	Chlorpyrifos	Not detected	0.05	0.0254	ug/L	8/3/04	8/12/04
EPA 8141A	Coumaphos	Not detected	0.20	0.13	ug/L	8/3/04	8/12/04
EPA 8141A	Def	Not detected	0.10	0.084	ug/L	8/3/04	8/12/04
EPA 8141A	Demeton-S	Not detected	0.20	0.01	ug/L	8/3/04	8/12/04
EPA 8141A	Diazinon	Not detected	0.05	0.0282	ug/L	8/3/04	8/12/04
EPA 8141A	Dichlorvos	Not detected	0.20	0.02	ug/L	8/3/04	8/12/04
EPA 8141A	Dimethoate	Not detected	0.10	0.08	ug/L	8/3/04	8/12/04
EPA 8141A	Disulfoton	Not detected	0.10	0.02	ug/L	8/3/04	8/12/04
EPA 8141A	EPN	Not detected	0.10	0.03	ug/L	8/3/04	8/12/04
EPA 8141A	EPTC	Not detected	0.10	0.03	ug/L	8/3/04	8/12/04
EPA 8141A	Ethion	Not detected	0.10	0.03	ug/L	8/3/04	8/12/04
EPA 8141A	Ethoprop	Not detected	0.10	0.0235	ug/L	8/3/04	8/12/04
EPA 8141A	Fenamiphos	Not detected	1.0	0.1	ug/L	8/3/04	8/12/04
EPA 8141A	Fensulfothion	Not detected	0.50	0.16	ug/L	8/3/04	8/12/04
EPA 8141A	Fenthion	Not detected	0.10	0.02	ug/L	8/3/04	8/12/04
EPA 8141A	Malathion	Not detected	0.10	0.05	ug/L	8/3/04	8/12/04
EPA 8141A	Merphos	Not detected	0.10	0.06	ug/L	8/3/04	8/12/04
EPA 8141A	Mevinphos	Not detected	0.70	0.0716	ug/L	8/3/04	8/12/04
EPA 8141A	Naled	Not detected	0.50	0.271	ug/L	8/3/04	8/12/04
EPA 8141A	Parathion, ethyl	Not detected	0.10	0.02	ug/L	8/3/04	8/12/04
EPA 8141A	Parathion, methyl	Not detected	0.10	0.0755	ug/L	8/3/04	8/12/04
EPA 8141A	Phorate	Not detected	0.10	0.0722	ug/L	8/3/04	8/12/04
EPA 8141A	Prowl	Not detected	0.10	0.041	ug/L	8/3/04	8/12/04
EPA 8141A	Ronnel	Not detected	0.10	0.03	ug/L	8/3/04	8/12/04
EPA 8141A	Stirophos	Not detected	0.10	0.06	ug/L	8/3/04	8/12/04
EPA 8141A	Tokuthion	Not detected	0.10	0.0216	ug/L	8/3/04	8/12/04
EPA 8141A	Trichloronate	Not detected	0.10	0.05	ug/L	8/3/04	8/12/04
EPA 8141A	Trifluralin	0.045 J	0.10	0.036	ug/L	8/3/04	8/12/04
EPA 8141A	Surrogate: Tributylphosphate	79.6	60-150		%	8/3/04	8/12/04

J = Estimated value, below quantitation limit.

Run #: 33,21
Instrument: NPD04,03
Sequence: 040814,12
Dilution Factor: 1
Initials: SS

Printed: 8/19/04 7:49:34 AM
APPL-F1-SC-MCRes/MCPQL

08/10/2004

Stephen Clark
Pacific EcoRisk
835 Arnold Drive Suite 104
Martinez, CA 94553



Dear Stephen Clark,

Thank you for selecting BSK Analytical Laboratories for your analytical testing needs. We have prepared this report in response to your request for analytical services. Please find enclosed the following sections for your complete laboratory report, each uniquely paginated:

CASE NARRATIVE: An overview of the work performed.

CERTIFICATE OF ANALYSIS: Analytical results.

QUALITY CONTROL (QC) SUMMARY: QC supporting the results presented herein.

REPORT OF SAMPLE INTEGRITY

CHAIN OF CUSTODY FORM

Certification: I certify that this data package is in compliance with NELAC Standards for applicable analyses under NELAP Certificate #04227CA, and is in compliance with ELAP Standards for applicable certified analyses under ELAP Certificate #1180, except for the conditions listed.

If additional clarification of any information is required, please contact your Client Services Representative, Glen Brown, at (800) 877-8310 or (559) 497-2888.

BSK ANALYTICAL LABORATORIES

Glen Brown
Client Services Representative

Cynthia Hamilton
Quality Assurance Specialist



EPA 8141A OP Pesticide Water

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attr: Stephen Clark

Project: EAST SAN JOAQUIN RIVER WATERSHED COALIT

Sample ID: 01-DSAGR-035

Sample Collection Date: 7/31/04

ARF: 45039

APPL ID: AP73366

QCG: \$84AG-040803A-78357

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8141A	Surrogate: Triphenylphosphate	89.5	56-129		%	8/3/04	8/12/04

J = Estimated value, below quantitation limit.

Run #: 33,21
Instrument: NPD04,03
Sequence: 040814,12
Dilution Factor: 1
Initials: SS

Printed: 8/16/04 12:42:54 PM
APPL-F1-SC-MCRes/MCPQL

EPA 8141A OP Pesticide Water

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark

Project: EAST SAN JOAQUIN RIVER WATERSHED COALIT

ARF: 45039

Sample ID: 01-DCAGR-041

APPL ID: AP73367

Sample Collection Date: 7/31/04

QCG: \$84AG-040803A-78357

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8141A	Azinphosmethyl	Not detected	1.0	0.488	ug/L	8/3/04	8/12/04
EPA 8141A	Bolstar	Not detected	0.10	0.0716	ug/L	8/3/04	8/12/04
EPA 8141A	Chlorpyrifos	Not detected	0.05	0.0254	ug/L	8/3/04	8/12/04
EPA 8141A	Coumaphos	Not detected	0.20	0.13	ug/L	8/3/04	8/12/04
EPA 8141A	Def	Not detected	0.10	0.084	ug/L	8/3/04	8/12/04
EPA 8141A	Demeton-S	Not detected	0.20	0.01	ug/L	8/3/04	8/12/04
EPA 8141A	Diazinon	Not detected	0.05	0.0282	ug/L	8/3/04	8/12/04
EPA 8141A	Dichlorvos	Not detected	0.20	0.02	ug/L	8/3/04	8/12/04
EPA 8141A	Dimethoate	Not detected	0.10	0.08	ug/L	8/3/04	8/12/04
EPA 8141A	Disulfoton	Not detected	0.10	0.02	ug/L	8/3/04	8/12/04
EPA 8141A	EPN	Not detected	0.10	0.03	ug/L	8/3/04	8/12/04
EPA 8141A	EPTC	Not detected	0.10	0.03	ug/L	8/3/04	8/12/04
EPA 8141A	Ethion	Not detected	0.10	0.03	ug/L	8/3/04	8/12/04
EPA 8141A	Ethoprop	Not detected	0.10	0.0235	ug/L	8/3/04	8/12/04
EPA 8141A	Fenamiphos	Not detected	1.0	0.1	ug/L	8/3/04	8/12/04
EPA 8141A	Fensulfothion	Not detected	0.50	0.16	ug/L	8/3/04	8/12/04
EPA 8141A	Fenthion	Not detected	0.10	0.02	ug/L	8/3/04	8/12/04
EPA 8141A	Malathion	Not detected	0.10	0.05	ug/L	8/3/04	8/12/04
EPA 8141A	Merphos	Not detected	0.10	0.06	ug/L	8/3/04	8/12/04
EPA 8141A	Mevinphos	Not detected	0.70	0.0716	ug/L	8/3/04	8/12/04
EPA 8141A	Naled	Not detected	0.50	0.271	ug/L	8/3/04	8/12/04
EPA 8141A	Parathion, ethyl	Not detected	0.10	0.02	ug/L	8/3/04	8/12/04
EPA 8141A	Parathion, methyl	Not detected	0.10	0.0755	ug/L	8/3/04	8/12/04
EPA 8141A	Phorate	Not detected	0.10	0.0722	ug/L	8/3/04	8/12/04
EPA 8141A	Prowl	Not detected	0.10	0.041	ug/L	8/3/04	8/12/04
EPA 8141A	Ronnel	Not detected	0.10	0.03	ug/L	8/3/04	8/12/04
EPA 8141A	Stirophos	Not detected	0.10	0.06	ug/L	8/3/04	8/12/04
EPA 8141A	Tokuthion	Not detected	0.10	0.0216	ug/L	8/3/04	8/12/04
EPA 8141A	Trichloronate	Not detected	0.10	0.05	ug/L	8/3/04	8/12/04
EPA 8141A	Trifluralin	Not detected	0.10	0.036	ug/L	8/3/04	8/12/04
EPA 8141A	Surrogate: Tributylphosphate	77.9	60-150		%	8/3/04	8/12/04

Run #: 34,22
Instrument: NPD04,03
Sequence: 040814,12
Dilution Factor: 1
Initials: SS

Printed: 8/19/04 7:49:34 AM
APPL-F1-SC-MCRes/MCPQL

EPA 8141A OP Pesticide Water

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark
Project: EAST SAN JOAQUIN RIVER WATERSHED COALIT

ARF: 45039

Sample ID: 01-DCAGR-041

APPL ID: AP73367

Sample Collection Date: 7/31/04

QCG: \$84AG-040803A-78357

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8141A	Surrogate: Triphenylphosphate	90.5	56-129		%	8/3/04	8/12/04

Run #: 34,25
Instrument: NPD04,03
Sequence: 040814,12
Dilution Factor: 1
Initials: SS

Printed: 8/16/04 12:42:54 PM
APPL-F1-SC-MCRes/MCPQL



September 23, 2004

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, California 94553

Attn: Stephen Clark

Subject: Report of Data: Case 45270

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Dear Mr. Clark:

Four water samples for Project "Eastside San Joaquin River Watershed" were received September 1, 2004, in good condition. Written results are being provided on this September 23, 2004, for the requested analysis. All holding times were met.

For the EPA 8141A analysis, the samples were extracted according to EPA method 3510C.

For the EPA 8081A analysis, the samples were extracted according to EPA method 3510C. For the Lab Control Spike, the TC_mX surrogate recovered below the 25% control limits, at 19.2%. The supporting surrogate and the spike analytes met acceptance criteria. No further action was taken.

No other unusual problems or complications were encountered with this sample set.

If you have any questions or require further information, please contact us at your convenience. Thank you for choosing APPL, Inc.

Sincerely,

Leonard Fong, Ph.D., Laboratory Director
APPL, Inc.

LF/sd
Enclosure
cc: File

Number of pages in this report 15

EPA 8081A Pyrethroids WATER

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark

Project: EAST SAN JOAQUIN RIVER WATERSHED COALITI

ARF: 45270

Sample ID: 02-ARDCL-006

APPL ID: AP74804

Sample Collection Date: 8/31/04

QCG: \$81PY-040907A-79206

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8081A	Bifenthrin	Not detected	0.02	0.006	ug/L	9/7/04	9/11/04
EPA 8081A	Cyfluthrin	Not detected	0.03	0.003	ug/L	9/7/04	9/11/04
EPA 8081A	Cypermethrin	Not detected	0.10	0.004	ug/L	9/7/04	9/11/04
EPA 8081A	Esfenvalerate/Fenvalerate	Not detected	0.02	0.002	ug/L	9/7/04	9/11/04
EPA 8081A	Lambda cyhalothrin	Not detected	0.02	0.001	ug/L	9/7/04	9/11/04
EPA 8081A	Permethrin	Not detected	0.02	0.009	ug/L	9/7/04	9/11/04
EPA 8081A	Surrogate: DECA	66.0	25-143		%	9/7/04	9/11/04
EPA 8081A	Surrogate: TCmX	45.4	25-144		%	9/7/04	9/11/04

Run #: 159 Instrument: LUCY Sequence: 040909 Dilution Factor: 1 Initials: SA
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Printed: 9/21/04 3:22:40 PM
APPL-F1-SC-MCRes/MCPQL

EPA 8081A Pyrethroids WATER

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark

Project: EAST SAN JOAQUIN RIVER WATERSHED COALITI

ARF: 45270

Sample ID: 02-MRSFD-013

APPL ID: AP74805

Sample Collection Date: 8/31/04

QCG: \$81PY-040907A-79206

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8081A	Bifenthrin	Not detected	0.02	0.006	ug/L	9/7/04	9/11/04
EPA 8081A	Cyfluthrin	Not detected	0.03	0.003	ug/L	9/7/04	9/11/04
EPA 8081A	Cypermethrin	Not detected	0.10	0.004	ug/L	9/7/04	9/11/04
EPA 8081A	Esfenvalerate/Fenvalerate	Not detected	0.02	0.002	ug/L	9/7/04	9/11/04
EPA 8081A	Lambda cyhalothrin	Not detected	0.02	0.001	ug/L	9/7/04	9/11/04
EPA 8081A	Permethrin	Not detected	0.02	0.009	ug/L	9/7/04	9/11/04
EPA 8081A	Surrogate: DECA	68.5	25-143		%	9/7/04	9/11/04
EPA 8081A	Surrogate: TCmX	47.2	25-144		%	9/7/04	9/11/04

Run #: 160 Instrument: LUCY Sequence: 040909 Dilution Factor: 1 Initials: SA
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Printed: 9/21/04 3:22:40 PM
APPL-F1-SC-MCRes/MCPQL

EPA 8081A Pyrethroids WATER

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark

Project: EAST SAN JOAQUIN RIVER WATERSHED COALITI

ARF: 45270

Sample ID: 02-DSAGR-020

APPL ID: AP74806

Sample Collection Date: 8/31/04

QCG: \$81PY-040907A-79206

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8081A	Bifenthrin	Not detected	0.02	0.006	ug/L	9/7/04	9/11/04
EPA 8081A	Cyfluthrin	Not detected	0.03	0.003	ug/L	9/7/04	9/11/04
EPA 8081A	Cypermethrin	Not detected	0.10	0.004	ug/L	9/7/04	9/11/04
EPA 8081A	Esfenvalerate/Fenvalerate	Not detected	0.02	0.002	ug/L	9/7/04	9/11/04
EPA 8081A	Lambda cyhalothrin	Not detected	0.02	0.001	ug/L	9/7/04	9/11/04
EPA 8081A	Permethrin	Not detected	0.02	0.009	ug/L	9/7/04	9/11/04
EPA 8081A	Surrogate: DECA	61.7	25-143		%	9/7/04	9/11/04
EPA 8081A	Surrogate: TCmX	43.5	25-144		%	9/7/04	9/11/04

Run #: 161 Instrument: LUCY Sequence: 040909 Dilution Factor: 1 Initials: SA
--

Printed: 9/21/04 3:22:41 PM
APPL-F1-SC-MCRes/MCPQL

EPA 8081A Pyrethroids WATER

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark
Project: EAST SAN JOAQUIN RIVER WATERSHED COALITI
Sample ID: 02-DCAGR-028
Sample Collection Date: 8/31/04

ARF: 45270
APPL ID: AP74807
QCG: \$81PY-040907A-79206

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8081A	Bifenthrin	Not detected	0.02	0.006	ug/L	9/7/04	9/11/04
EPA 8081A	Cyfluthrin	Not detected	0.03	0.003	ug/L	9/7/04	9/11/04
EPA 8081A	Cypermethrin	Not detected	0.10	0.004	ug/L	9/7/04	9/11/04
EPA 8081A	Esfenvalerate/Fenvalerate	Not detected	0.02	0.002	ug/L	9/7/04	9/11/04
EPA 8081A	Lambda cyhalothrin	Not detected	0.02	0.001	ug/L	9/7/04	9/11/04
EPA 8081A	Permethrin	Not detected	0.02	0.009	ug/L	9/7/04	9/11/04
EPA 8081A	Surrogate: DECA	63.7	25-143		%	9/7/04	9/11/04
EPA 8081A	Surrogate: TCmX	46.1	25-144		%	9/7/04	9/11/04

Run #: 162 Instrument: LUCY Sequence: 040909 Dilution Factor: 1 Initials: SA
--

Printed: 9/21/04 3:22:41 PM
APPL-F1-SC-MCRes/MCPQL

EPA 8141A OP Pesticide Water

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark

Project: EAST SAN JOAQUIN RIVER WATERSHED COALITI

ARF: 45270

Sample ID: 02-ARDCL-007

APPL ID: AP74808

Sample Collection Date: 8/31/04

QCG: \$84AG-040907A-79273

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8141A	Chlorpyrifos	Not detected	0.05	0.0254	ug/L	9/7/04	9/18/04
EPA 8141A	Diazinon	Not detected	0.05	0.0282	ug/L	9/7/04	9/18/04
EPA 8141A	Surrogate: Tributylphosphate	106	60-150		%	9/7/04	9/18/04
EPA 8141A	Surrogate: Triphenylphosphate	101	56-129		%	9/7/04	9/18/04

Run #: 39 Instrument: NPD03 Sequence: 040917 Dilution Factor: 1 Initials: EM
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Printed: 9/20/04 11:55:21 AM
APPL-F1-SC-MCRes/MCPQL

EPA 8141A OP Pesticide Water

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark

Project: EAST SAN JOAQUIN RIVER WATERSHED COALITI

ARF: 45270

Sample ID: 02-MRSFD-014

APPL ID: AP74809

Sample Collection Date: 8/31/04

QCG: \$84AG-040907A-79273

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8141A	Chlorpyrifos	Not detected	0.05	0.0254	ug/L	9/7/04	9/18/04
EPA 8141A	Diazinon	Not detected	0.05	0.0282	ug/L	9/7/04	9/18/04
EPA 8141A	Surrogate: Tributylphosphate	101	60-150		%	9/7/04	9/18/04
EPA 8141A	Surrogate: Triphenylphosphate	90.9	56-129		%	9/7/04	9/18/04

Run #: 40 Instrument: NPD03 Sequence: 040917 Dilution Factor: 1 Initials: EM
--

Printed: 9/20/04 11:55:21 AM
APPL-F1-SC-MCRes/MCPQL

EPA 8141A OP Pesticide Water

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark

Project: EAST SAN JOAQUIN RIVER WATERSHED COALITI

ARF: 45270

Sample ID: 02-DSAGR-021

APPL ID: AP74810

Sample Collection Date: 8/31/04

QCG: \$84AG-040907A-79273

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8141A	Chlorpyrifos	Not detected	0.05	0.0254	ug/L	9/7/04	9/18/04
EPA 8141A	Diazinon	Not detected	0.05	0.0282	ug/L	9/7/04	9/18/04
EPA 8141A	Surrogate: Tributylphosphate	101	60-150		%	9/7/04	9/18/04
EPA 8141A	Surrogate: Triphenylphosphate	92.2	56-129		%	9/7/04	9/18/04

Run #: 44 Instrument: NPD03 Sequence: 040917 Dilution Factor: 1 Initials: EM
--

Printed: 9/20/04 11:55:21 AM
APPL-F1-SC-MCRes/MCPQL

EPA 8141A OP Pesticide Water

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark

Project: EAST SAN JOAQUIN RIVER WATERSHED COALITI

ARF: 45270

Sample ID: 02-DCAGR-029

APPL ID: AP74811

Sample Collection Date: 8/31/04

QCG: \$84AG-040907A-79273

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8141A	Chlorpyrifos	Not detected	0.05	0.0254	ug/L	9/7/04	9/18/04
EPA 8141A	Diazinon	Not detected	0.05	0.0282	ug/L	9/7/04	9/18/04
EPA 8141A	Surrogate: Tributylphosphate	102	60-150		%	9/7/04	9/18/04
EPA 8141A	Surrogate: Triphenylphosphate	91.0	56-129		%	9/7/04	9/18/04

Run #: 45 Instrument: NPD03 Sequence: 040917 Dilution Factor: 1 Initials: EM
--

Printed: 9/20/04 11:55:22 AM
APPL-F1-SC-MCRes/MCPQL



October 25, 2004

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, California 94553

Attn: Stephen Clark

Subject: Report of Data: Case 45481

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Dear Mr. Clark:

Eight water samples for Project "E. San Joaquin River Watershed Coalition" were received September 30, 2004, in good condition. Written results are being provided on this October 25, 2004, for the requested analyses. All holding times were met.

For the EPA 8081A analysis, the samples were extracted according to EPA method 3510C.

For the EPA 8141A analysis, the samples were extracted according to EPA method 3510C.

No unusual problems or complications were encountered with this sample set.

If you have any questions or require further information, please contact us at your convenience. Thank you for choosing APPL, Inc.

Sincerely,

Leonard Fong, Ph.D., Laboratory Director
APPL, Inc.

LF/ab
Enclosure
cc: File

Number of pages in this report 15

EPA 8081A Pyrethroids WATER

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

Attn: Stephen Clark

Project: E. San Joaquin River Watershed Coalition

Sample ID: 03-ARDCL-005

Sample Collection Date: 9/29/04

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 45481

APPL ID: AP76057

QCG: \$81PY-041005A-80280

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8081A	Cypermethrin	Not detected	0.10	0.004	ug/L	10/5/04	10/15/04
EPA 8081A	Esfenvalerate/Fenvalerate	Not detected	0.02	0.002	ug/L	10/5/04	10/15/04
EPA 8081A	Lambda cyhalothrin	Not detected	0.02	0.001	ug/L	10/5/04	10/15/04
EPA 8081A	Permethrin	Not detected	0.02	0.008	ug/L	10/5/04	10/15/04
EPA 8081A	Surrogate: DECA	73.9	25-143		%	10/5/04	10/15/04
EPA 8081A	Surrogate: TCmX	54.3	25-144		%	10/5/04	10/15/04

Run #: 62
Instrument: LUCY
Sequence: 041014
Dilution Factor: 1
Initials: SA

Printed: 10/19/04 4:17:00 PM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8081A Pyrethroids WATER

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark

Project: E. San Joaquin River Watershed Coalition

Sample ID: 03-MRSFD-011

Sample Collection Date: 9/29/04

ARF: 45481

APPL ID: AP76058

QCG: \$81PY-041005A-80280

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8081A	Cypermethrin	Not detected	0.10	0.004	ug/L	10/5/04	10/15/04
EPA 8081A	Esfenvalerate/Fenvalerate	Not detected	0.02	0.002	ug/L	10/5/04	10/15/04
EPA 8081A	Lambda cyhalothrin	Not detected	0.02	0.001	ug/L	10/5/04	10/15/04
EPA 8081A	Permethrin	Not detected	0.02	0.009	ug/L	10/5/04	10/15/04
EPA 8081A	Surrogate: DECA	80.1	25-143		%	10/5/04	10/15/04
EPA 8081A	Surrogate: TCmX	50.0	25-144		%	10/5/04	10/15/04

Run #: 63 Instrument: LUCY Sequence: 041014 Dilution Factor: 1 Initials: SA

Printed: 10/19/04 4:17:01 PM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8081A Pyrethroids WATER

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

Attn: Stephen Clark
Project: E. San Joaquin River Watershed Coalition
Sample ID: 03-DSAGR-017
Sample Collection Date: 9/29/04

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 45481
APPL ID: AP76059
QCG: \$81PY-041005A-80280

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8081A	Cypermethrin	Not detected	0.10	0.004	ug/L	10/5/04	10/15/04
EPA 8081A	Esfenvalerate/Fenvalerate	0.05	0.02	0.002	ug/L	10/5/04	10/15/04
EPA 8081A	Lambda cyhalothrin	Not detected	0.02	0.001	ug/L	10/5/04	10/15/04
EPA 8081A	Permethrin	Not detected	0.02	0.009	ug/L	10/5/04	10/15/04
EPA 8081A	Surrogate: DECA	72.6	25-143		%	10/5/04	10/15/04
EPA 8081A	Surrogate: TCmX	62.5	25-144		%	10/5/04	10/15/04

Run #: 64 Instrument: LUCY Sequence: 041014 Dilution Factor: 1 Initials: SA

Printed: 10/19/04 4:17:01 PM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8081A Pyrethroids WATER

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

Attn: Stephen Clark
Project: E. San Joaquin River Watershed Coalition

Sample ID: 03-DCAGR-023
Sample Collection Date: 9/29/04

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 45481
APPL ID: AP76060
QCG: \$81PY-041005A-80280

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8081A	Cypermethrin	Not detected	0.10	0.004	ug/L	10/5/04	10/15/04
EPA 8081A	Esfenvalerate/Fenvalerate	Not detected	0.02	0.002	ug/L	10/5/04	10/15/04
EPA 8081A	Lambda cyhalothrin	Not detected	0.02	0.001	ug/L	10/5/04	10/15/04
EPA 8081A	Permethrin	Not detected	0.02	0.009	ug/L	10/5/04	10/15/04
EPA 8081A	Surrogate: DECA	78.2	25-143		%	10/5/04	10/15/04
EPA 8081A	Surrogate: TCmX	65.8	25-144		%	10/5/04	10/15/04

Run #: 65 Instrument: LUCY Sequence: 041014 Dilution Factor: 1 Initials: SA

Printed: 10/19/04 4:17:01 PM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8141A OP Pesticide Water

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

Attn: Stephen Clark
Project: E. San Joaquin River Watershed Coalition
Sample ID: 03-ARDCL-006
Sample Collection Date: 9/29/04

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 45481
APPL ID: AP76061
QCG: \$84AG-041005A-80160

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8141A	Chlorpyrifos	0.026 J	0.05	0.0254	ug/L	10/5/04	10/15/04
EPA 8141A	Diazinon	Not detected	0.05	0.0282	ug/L	10/5/04	10/15/04
EPA 8141A	Surrogate: Tributylphosphate	87.4	60-150		%	10/5/04	10/15/04
EPA 8141A	Surrogate: Triphenylphosphate	85.0	56-129		%	10/5/04	10/15/04

J = Estimated value, below quantitation limit.

Run #: 27 Instrument: NPD03 Sequence: 041014 Dilution Factor: 1 Initials: EM
--

Printed: 10/15/04 11:05:58 AM
APPL-F1-SC-NoMC-REG MDLs

EPA 8141A OP Pesticide Water

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martínez, CA 94553

Attn: Stephen Clark
Project: E. San Joaquin River Watershed Coalition
Sample ID: 03-MRSFD-012
Sample Collection Date: 9/29/04

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 45481
APPL ID: AP76062
QCG: \$84AG-041005A-80160

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8141A	Chlorpyrifos	Not detected	0.05	0.0254	ug/L	10/5/04	10/15/04
EPA 8141A	Diazinon	Not detected	0.05	0.0282	ug/L	10/5/04	10/15/04
EPA 8141A	Surrogate: Tributylphosphate	116	60-150		%	10/5/04	10/15/04
EPA 8141A	Surrogate: Triphenylphosphate	104	56-129		%	10/5/04	10/15/04

Run #: 28
Instrument: NPD03
Sequence: 041014
Dilution Factor: 1
Initials: EM

Printed: 10/15/04 11:05:58 AM
APPL-F1-SC-NoMC-REG MDLs

EPA 8141A OP Pesticide Water

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark

Project: E. San Joaquin River Watershed Coalition

Sample ID: 03-DSAGR-018

Sample Collection Date: 9/29/04

ARF: 45481

APPL ID: AP76063

QCG: \$84AG-041005A-80160

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8141A	Chlorpyrifos	Not detected	0.05	0.0254	ug/L	10/5/04	10/15/04
EPA 8141A	Diazinon	Not detected	0.05	0.0282	ug/L	10/5/04	10/15/04
EPA 8141A	Surrogate: Tributylphosphate	119	60-150		%	10/5/04	10/15/04
EPA 8141A	Surrogate: Triphenylphosphate	105	56-129		%	10/5/04	10/15/04

Run #: 29 Instrument: NPD03 Sequence: 041014 Dilution Factor: 1 Initials: EM
--

Printed: 10/15/04 11:05:58 AM
APPL-F1-SC-NoMC-REG MDLs

EPA 8141A OP Pesticide Water

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark
Project: E. San Joaquin River Watershed Coalition
Sample ID: 03-DCAGR-024
Sample Collection Date: 9/29/04

ARF: 45481
APPL ID: AP76064
QCG: \$84AG-041005A-80160

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8141A	Chlorpyrifos	Not detected	0.05	0.0254	ug/L	10/5/04	10/15/04
EPA 8141A	Diazinon	Not detected	0.05	0.0282	ug/L	10/5/04	10/15/04
EPA 8141A	Surrogate: Tributylphosphate	126	60-150		%	10/5/04	10/15/04
EPA 8141A	Surrogate: Triphenylphosphate	119	58-129		%	10/5/04	10/15/04

Run #: 30 Instrument: NPD03 Sequence: 041014 Dilution Factor: 1 Initials: EM
--

Printed: 10/15/04 11:05:58 AM
APPL-F1-SC-NoMC-REG MDLs

AMR set
5

LAB
QC sheets

BSK ANALYTICAL LABORATORIES



QC Summary Report

08/10/2004



BSK Submission : 2004080001
 Client : Pacific EcoRisk
 Date Submitted : 08/02/2004
 Project ID :

NELAP Certificate #04227CA
 ELAP Certificate #1180

Project Desc : East San Joaquin River Watershed Coalition

BSK StarLims Run #: 76913  Instrument ID: _____
 Analyst Initials: LUEV Method Number: COLOR

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Color (A.P.H.A)	LDUP	477512	150	units	0			150	20	N/A	08/02/04	Acceptable
Turbidity	LDUP	477512	41	NTU	0			41	20	N/A	08/02/04	Acceptable
Color (A.P.H.A)	RBLK	N/A	0	units	<1				1	N/A	08/02/04	Acceptable
Turbidity	RBLK	N/A	0.02	NTU	<0.1				0.1	N/A	08/02/04	Acceptable

StarLims Run 76913 includes the following BSK Sample ID# :

477512 477513 477514 477515 477516 477517 477579 477580

BSK StarLims Run #: 76931  Instrument ID: PHI
 Analyst Initials: MARIAM Method Number: ALK

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Alkalinity (as CaCO3)	LCS	N/A	108	mg/L	108		100	ND	120	80	08/02/04	Acceptable
Alkalinity (as CaCO3)	LCSD	N/A	109	mg/L	109	0.93	100	ND	120	80	08/02/04	Acceptable
Alkalinity (as CaCO3)	LDUP	477186	0	mg/L	N/A			ND	10	N/A	08/02/04	Acceptable
Bicarbonate (as CaCO3)	LDUP	477186	0	mg/L	N/A			ND	10	N/A	08/02/04	Acceptable
Carbonate (as CaCO3)	LDUP	477186	0	mg/L	N/A			ND	10	N/A	08/02/04	Acceptable
Conductivity - Specific (EC)	LDUP	477186	1045	µmho/c	1			1000	20	N/A	08/02/04	Acceptable
Hydroxide (as CaCO3)	LDUP	477186	0	mg/L	N/A			ND	10	N/A	08/02/04	Acceptable
pH	LDUP	477186	4.43	Std. Unit	0			4.4	20	N/A	08/02/04	Acceptable
Alkalinity (as CaCO3)	RBLK	N/A	0	mg/L	<1				1	N/A	08/02/04	Acceptable
Bicarbonate (as CaCO3)	RBLK	N/A	0	mg/L	<1				1	N/A	08/02/04	Acceptable
Carbonate (as CaCO3)	RBLK	N/A	0	mg/L	<1				1	N/A	08/02/04	Acceptable
Conductivity - Specific (EC)	RBLK	N/A	0	µmho/c	<1				1	N/A	08/02/04	Acceptable
Hydroxide (as CaCO3)	RBLK	N/A	0	mg/L	<1				1	N/A	08/02/04	Acceptable

StarLims Run 76931 includes the following BSK Sample ID# :

477186 477187 477188 477189 477190 477191 477192 477193 477194 477220 477226 477227 477228 477229 477512 477513
 477514 477515 477516 477517 477766 477767 477768 477769

BSK StarLims Run #: 77121  Instrument ID: BALANCE1
 Analyst Initials: LUEV Method Number: TDS

%Rec: Percent Recovered
 RPD: Relative Percent Difference
 UCL: Upper Control Limit
 LCL: Lower Control Limit
 LCS: Laboratory Control Sample
 LCSD: Laboratory Control Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD
 OOS-High: QC Result Above UCL
 OOS-Low: QC Result Below LCL
 MS: Matrix Spike
 MSD: Matrix Spike Duplicate
 RBLK: Reagent (Method) Blank

Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

BSK ANALYTICAL LABORATORIES



QC Summary Report

08/10/2004



BSK Submission : 2004080001
 Client : Pacific EcoRisk
 Date Submitted : 08/02/2004
 Project ID :

NELAP Certificate #04227CA
 ELAP Certificate #1180

Project Desc : East San Joaquin River Watershed Coalition

BSK StarLims Run #: 77121



Instrument ID: BALANCE1

Analyst Initials: LUEV

Method Number: TDS

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Total Dissolved Solids (TDS)	LDUP	477512	1300	mg/L	7			1400	20	N/A	08/06/04	Acceptable
Total Dissolved Solids (TDS)	RBLK	N/A	0	mg/L	<5				5	N/A	08/06/04	Acceptable

StarLims Run 77121 includes the following BSK Sample ID# :

477512 477513 477514 477515 477516 477517 478540 478551 478552 478580 479163 479164

Approved by:

%Rec: Percent Recovered
 RPD: Relative Percent Difference
 UCL: Upper Control Limit
 LCL: Lower Control Limit
 LCS: Laboratory Control Sample
 LCSD: Laboratory Control Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD
 OOS-High: QC Result Above UCL
 OOS-Low: QC Result Below LCL
 MS: Matrix Spike
 MSD: Matrix Spike Duplicate
 RBLK: Reagent (Method) Blank

Page 2 of 2

Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

09/08/2004

Stephen Clark
Pacific EcoRisk
835 Arnold Drive Suite 104
Martinez, CA 94553



Dear Stephen Clark,

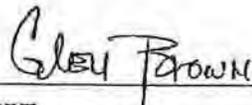
Thank you for selecting BSK Analytical Laboratories for your analytical testing needs. We have prepared this report in response to your request for analytical services. Please find enclosed the following sections for your complete laboratory report, each uniquely paginated:

CASE NARRATIVE: An overview of the work performed.
CERTIFICATE OF ANALYSIS: Analytical results.
QUALITY CONTROL (QC) SUMMARY: QC supporting the results presented herein.
REPORT OF SAMPLE INTEGRITY
CHAIN OF CUSTODY FORM

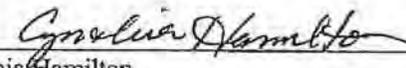
Certification: I certify that this data package is in compliance with NELAC Standards for applicable analyses under NELAP Certificate #04227CA, and is in compliance with ELAP Standards for applicable certified analyses under ELAP Certificate #1180, except for the conditions listed.

If additional clarification of any information is required, please contact your Client Services Representative, Glen Brown, at (800) 877-8310 or (559) 497-2888.

BSK ANALYTICAL LABORATORIES



Glen Brown
Client Services Representative



Cynthia Hamilton
Quality Assurance Specialist



BSK ANALYTICAL LABORATORIES



QC Summary Report

09/08/2004



BSK Submission : 2004090111
 Client : Pacific EcoRisk
 Date Submitted : 09/01/2004
 Project ID :

NELAP Certificate #04227CA
 ELAP Certificate #1180

Project Desc : East San Joaquin River Watershed Coalition

BSK StarLims Run #: 78821



Instrument ID: PH1

Analyst Initials: MARIAM

Method Number: ALK

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Alkalinity (as CaCO3)	LCS	N/A	108	mg/L	108		100	ND	120	80	09/01/04	Acceptable
Alkalinity (as CaCO3)	LCSD	N/A	109	mg/L	109	0.93	100	ND	120	80	09/01/04	Acceptable
Alkalinity (as CaCO3)	LDUP	491287	165	mg/L	0			160	10	N/A	09/01/04	Acceptable
Bicarbonate (as CaCO3)	LDUP	491287	165	mg/L	0			160	10	N/A	09/01/04	Acceptable
Carbonate (as CaCO3)	LDUP	491287	0	mg/L	N/A			ND	10	N/A	09/01/04	Acceptable
Conductivity - Specific (EC)	LDUP	491287	405	µmho/c	0			400	20	N/A	09/01/04	Acceptable
Hydroxide (as CaCO3)	LDUP	491287	0	mg/L	N/A			ND	10	N/A	09/01/04	Acceptable
pH	LDUP	491287	7.01	Std. Unit	2			7.2	20	N/A	09/01/04	Acceptable
Alkalinity (as CaCO3)	RBLK	N/A	0	mg/L	< 1				1	N/A	09/01/04	Acceptable
Bicarbonate (as CaCO3)	RBLK	N/A	0	mg/L	< 1				1	N/A	09/01/04	Acceptable
Carbonate (as CaCO3)	RBLK	N/A	0	mg/L	< 1				1	N/A	09/01/04	Acceptable
Conductivity - Specific (EC)	RBLK	N/A	0	µmho/c	< 1				1	N/A	09/01/04	Acceptable
Hydroxide (as CaCO3)	RBLK	N/A	0	mg/L	< 1				1	N/A	09/01/04	Acceptable

StarLims Run 78821 includes the following BSK Sample ID#:

491263 491264 491265 491266 491277 491278 491279 491280 491287 491346 491370 491371 491372 491373 491374 491375
 491428 491429 491430 491431

BSK StarLims Run #: 78822



Instrument ID: TURB1

Analyst Initials: LUEV

Method Number: COLOR

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Color (A.P.H.A)	LDUP	490967	0	units	N/A			ND	20	N/A	09/01/04	Acceptable
	LDUP	491278	20	units	0			20	20	N/A	09/01/04	Acceptable
Odor	LDUP	490967	1	TON	0			1.0	20	N/A	09/01/04	Acceptable
	LDUP	490967	0.07	NTU	N/A			ND	20	N/A	09/01/04	Acceptable
Turbidity	LDUP	491278	1.4	NTU	0			1.4	20	N/A	09/01/04	Acceptable
	RBLK	N/A	0	units	< 1				1	N/A	09/01/04	Acceptable
Color (A.P.H.A)	RBLK	N/A	1	TON	< 1				1	N/A	09/01/04	Acceptable
Odor	RBLK	N/A	0.03	NTU	< 0.1				0.1	N/A	09/01/04	Acceptable
Turbidity	RBLK	N/A										

%Rec: Percent Recovered
 RPD: Relative Percent Difference
 UCL: Upper Control Limit
 LCL: Lower Control Limit
 LCS: Laboratory Control Sample
 LCSD: Laboratory Control Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD
 OOS-High: QC Result Above UCL
 OOS-Low: QC Result Below LCL
 MS: Matrix Spike
 MSD: Matrix Spike Duplicate
 RBLK: Reagent (Method) Blank

Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

BSK ANALYTICAL LABORATORIES



QC Summary Report

09/08/2004



BSK Submission : 2004090111
 Client : Pacific EcoRisk
 Date Submitted : 09/01/2004
 Project ID :

NELAP Certificate #04227CA
 ELAP Certificate #1180

Project Desc : East San Joaquin River Watershed Coalition

StarLims Run 78822 includes the following BSK Sample ID#:

490967 490968 491088 491110 491186 491187 491242 491277 491278 491279 491280 491281 491282 491283 491284 491285
 491402 491403 491404

BSK StarLims Run #: 78996



Instrument ID: BALANCE1

Analyst Initials: LUEV

Method Number: TDS

Analyte Results

Analyte	QC Type	Matrix Spike JD	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Total Dissolved Solids (TDS)	LDUP	491277	580	mg/L	20			710	20	N/A	09/08/04	Acceptable
Total Dissolved Solids (TDS)	RBLK	N/A	0	mg/L	< 5				5	N/A	09/08/04	Acceptable

StarLims Run 78996 includes the following BSK Sample ID#:

490629 490630 490967 490968 490998 490999 491000 491001 491002 491003 491004 491005 491006 491088 491277 491278
 491279 491280 492518 492519

Approved by: _____

%Rec: Percent Recovered
 RPD: Relative Percent Difference
 UCL: Upper Control Limit
 LCL: Lower Control Limit
 LCS: Laboratory Control Sample
 LCSD: Laboratory Control Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD
 OOS-High: QC Result Above UCL
 OOS-Low: QC Result Below LCL
 MS: Matrix Spike
 MSD: Matrix Spike Duplicate
 RBLK: Reagent (Method) Blank

Page 2 of 2

Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

BSK ANALYTICAL LABORATORIES



QC Summary Report

10/14/2004



BSK Submission : 2004092146
 Client : Pacific EcoRisk
 Date Submitted : 09/30/2004
 Project ID :

NELAP Certificate #04227CA
 ELAP Certificate #1180

Project Desc : East San Joaquin River Watershed Coalition

BSK StarLims Run #: 80400		Instrument ID: PH1										
Analyst Initials: MARIAM		Method Number: ALK										
Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Alkalinity (as CaCO3)	LCS	N/A	105	mg/L	105		100	ND	120	80	09/30/04	Acceptable
Alkalinity (as CaCO3)	LCSD	N/A	106	mg/L	106	0.95	100	ND	120	80	09/30/04	Acceptable
Alkalinity (as CaCO3)	LDUP	502358	607	mg/L	0			610	10	N/A	09/30/04	Acceptable
Bicarbonate (as CaCO3)	LDUP	502358	607	mg/L	0			610	10	N/A	09/30/04	Acceptable
Carbonate (as CaCO3)	LDUP	502358	0	mg/L	N/A			ND	10	N/A	09/30/04	Acceptable
Conductivity - Specific (EC)	LDUP	502358	1184	µmho/c	1			1200	20	N/A	09/30/04	Acceptable
	LDUP	502348	539	µmho/c	0			530	20	N/A	09/30/04	Acceptable
Hydroxide (as CaCO3)	LDUP	502358	0	mg/L	N/A			ND	10	N/A	09/30/04	Acceptable
pH	LDUP	502358	7.75	Std. Unit	0			7.7	20	N/A	09/30/04	Acceptable
Alkalinity (as CaCO3)	RBLK	N/A	0	mg/L	<1				1	N/A	09/30/04	Acceptable
Bicarbonate (as CaCO3)	RBLK	N/A	0	mg/L	<1				1	N/A	09/30/04	Acceptable
Carbonate (as CaCO3)	RBLK	N/A	0	mg/L	<1				1	N/A	09/30/04	Acceptable
Conductivity - Specific (EC)	RBLK	N/A	0	µmho/c	<1				1	N/A	09/30/04	Acceptable
Hydroxide (as CaCO3)	RBLK	N/A	0	mg/L	<1				1	N/A	09/30/04	Acceptable

StarLims Run 80400 includes the following BSK Sample ID#:

502187 502188 502189 502190 502191 502192 502193 502194 502348 502358 502445 502481 502482 502483 502484 502532
 502533 502534 502535 502703 502704 502705 502706 502730 502731 502732

BSK StarLims Run #: 80419		Instrument ID: COLOR										
Analyst Initials: LUEV		Method Number: COLOR										
Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Color (A.P.H.A)	LDUP	502532	0	units	N/A			ND	20	N/A	09/30/04	Acceptable
Odor	LDUP	502532	1	TON	0			1.0	20	N/A	09/30/04	Acceptable
Turbidity	LDUP	502532	0.2	NTU	0			0.20	20	N/A	09/30/04	Acceptable
Color (A.P.H.A)	RBLK	N/A	0	units	<1				1	N/A	09/30/04	Acceptable
Odor	RBLK	N/A	1	TON	<1				1	N/A	09/30/04	Acceptable
Turbidity	RBLK	N/A	0.04	NTU	<0.1				0.1	N/A	09/30/04	Acceptable

%Rec: Percent Recovered
 RPD: Relative Percent Difference
 UCL: Upper Control Limit
 LCL: Lower Control Limit
 LCS: Laboratory Control Sample
 LCSD: Laboratory Control Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD
 OOS-High: QC Result Above UCL
 OOS-Low: QC Result Below LCL
 MS: Matrix Spike
 MSD: Matrix Spike Duplicate
 RBLK: Reagent (Method) Blank

Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)



QC Summary Report

10/14/2004



BSK Submission : 2004092146
 Client : Pacific EcoRisk
 Date Submitted : 09/30/2004
 Project ID :

NELAP Certificate #04227CA
 ELAP Certificate #1180

Project Desc : East San Joaquin River Watershed Coalition

StarLims Run 80419 includes the following BSK Sample ID# :

502481 502482 502483 502484 502532 502533 502534 502535 502697 502749 502750 502751 502752 502823 502824 502825
 502863 502864

BSK StarLims Run #: 80604



Instrument ID: BALANCE1

Analyst Initials: LUEV

Method Number: TDS

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Total Dissolved Solids (TDS)	LDUP	502149	2400	mg/L	0			2400	20	N/A	10/06/04	Acceptable
Total Dissolved Solids (TDS)	RBLK	N/A	3	mg/L	< 5				5	N/A	10/06/04	Acceptable

StarLims Run 80604 includes the following BSK Sample ID# :

502149 502150 502151 502152 502167 502168 502203 502358 502445 502481 502482 502483 502484 502532 502533 502534
 502535 502697 502742 502743 503984 503985

BSK StarLims Run #: 80827



Instrument ID:

Analyst Initials: VONGH

Method Number: TOC

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Total Organic Carbon (TOC)	LCS	N/A	5.1	mg/L	102		5.0	ND	120	80	10/06/04	Acceptable
Total Organic Carbon (TOC)	LCSD	N/A	5.2	mg/L	104	2	5.0	ND	120	80	10/06/04	Acceptable
Total Organic Carbon (TOC)	MS	502742	6.6	mg/L	104		4.0	2.3	120	80	10/06/04	Acceptable
Total Organic Carbon (TOC)	MSD	502742	6.6	mg/L	104	0.0	4.0	2.3	120	80	10/06/04	Acceptable
Total Organic Carbon (TOC)	RBLK	N/A	0	mg/L	< 0.2				0.2	N/A	10/06/04	Acceptable

StarLims Run 80827 includes the following BSK Sample ID# :

502146 502147 502148 502149 502150 502152 502486 502487 502488 502700 502701 502702 502742 502743 502744 502745
 503028 503029 505626 505627 505628 505629 505630

BSK StarLims Run #: 81017



Instrument ID:

Analyst Initials: VONGH

Method Number: TOC

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Total Organic Carbon (TOC)	LCS	N/A	5.1	mg/L	102		5.0	ND	120	80	10/08/04	Acceptable
Total Organic Carbon (TOC)	LCSD	N/A	5.1	mg/L	102	0.0	5.0	ND	120	80	10/08/04	Acceptable

%Rec: Percent Recovered
 RPD: Relative Percent Difference
 UCL: Upper Control Limit
 LCL: Lower Control Limit
 LCS: Laboratory Control Sample
 LCSD: Laboratory Control Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD
 OOS-High: QC Result Above UCL
 OOS-Low: QC Result Below LCL
 MS: Matrix Spike
 MSD: Matrix Spike Duplicate
 RBLK: Reagent (Method) Blank

Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

BSK ANALYTICAL LABORATORIES



QC Summary Report

08/10/2004

NELAP Certificate #04227CA
ELAP Certificate #1180

BSK Submission : 2004080002
Client : Pacific EcoRisk
Date Submitted : 08/02/2004
Project ID :

Project Desc : East San Joaquin River Watershed Coalition

BSK StarLims Run #: 77338		Instrument ID:										
Analyst Initials: KASANNAP		Method Number: TOC										
Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Total Organic Carbon (TOC)	LCS	N/A	5.2	mg/L	104		5	ND	120	80	08/06/04	Acceptable
Total Organic Carbon (TOC)	LCSD	N/A	5.3	mg/L	106	0.0	5	ND	120	80	08/06/04	Acceptable
Total Organic Carbon (TOC)	MS	476598	5.2	mg/L	105		4	1.0	120	80	08/06/04	Acceptable
	MS	479425	28	mg/L	104		20	7.1	120	80	08/06/04	Acceptable
Total Organic Carbon (TOC)	MSD	476598	5.2	mg/L	105	0.0	4	1.0	120	80	08/06/04	Acceptable
	MSD	479425	28	mg/L	104	0.0	20	7.1	120	80	08/06/04	Acceptable
Total Organic Carbon (TOC)	RBLK	N/A	0	mg/L	< 0.2				0.2	N/A	08/06/04	Acceptable

StarLims Run 77338 includes the following BSK Sample ID# :

476597 476598 476599 476600 476601 476987 476988 476989 476992 477173 477519 477521 477522 477523 478276 479425
480759 480760 480761 480762 480763 480764 480765

BSK StarLims Run #: 77363		Instrument ID:										
Analyst Initials: KASANNAP		Method Number: TOC										
Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Total Organic Carbon (TOC)	LCS	N/A	5.3	mg/L	106		5	ND	120	80	08/09/04	Acceptable
Total Organic Carbon (TOC)	LCSD	N/A	5.3	mg/L	106	0.0	5	ND	120	80	08/09/04	Acceptable
Total Organic Carbon (TOC)	MS	479413	5.7	mg/L	105		4	1.5	120	80	08/09/04	Acceptable
Total Organic Carbon (TOC)	MSD	479413	5.6	mg/L	102	1.8	4	1.5	120	80	08/09/04	Acceptable
Total Organic Carbon (TOC)	RBLK	N/A	0	mg/L	< 0.2				0.2	N/A	08/09/04	Acceptable

StarLims Run 77363 includes the following BSK Sample ID# :

477170 477518 477520 478275 478516 478517 478683 478810 478811 479092 479411 479412 479413 479414 479415 479416
479417 479418 480920 480921 480922 480925 480926

Approved by:

%Rec: Percent Recovered
RPD: Relative Percent Difference
UCL: Upper Control Limit
LCL: Lower Control Limit
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD
OOS-High: QC Result Above UCL
OOS-Low: QC Result Below LCL
MS: Matrix Spike
MSD: Matrix Spike Duplicate
RBLK: Reagent (Method) Blank
Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

BSK ANALYTICAL LABORATORIES



QC Summary Report

09/06/2004



BSK Submission : 2004090109
 Client : Pacific EcoRisk
 Date Submitted : 09/01/2004
 Project ID :

NELAP Certificate #04227CA
 ELAP Certificate #1180

Project Desc : East San Joaquin River Watershed Coalition

BSK StarLims Run #: 78862



Instrument ID:

Analyst Initials: KASANNAP

Method Number: TOC

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Total Organic Carbon (TOC)	LCS	N/A	5.2	mg/L	104		5	ND	120	80	09/02/04	Acceptable
Total Organic Carbon (TOC)	LCSD	N/A	5.3	mg/L	106	2	5	ND	120	80	09/02/04	Acceptable
Total Organic Carbon (TOC)	MS	488202	6.2	mg/L	107		4	1.9	120	80	09/02/04	Acceptable
	MS	491275	13	mg/L	105		8	4.3	120	80	09/02/04	Acceptable
Total Organic Carbon (TOC)	MSD	488202	6.2	mg/L	107	0.0	4	1.9	120	80	09/02/04	Acceptable
	MSD	491275	13	mg/L	105	0.0	8	4.3	120	80	09/02/04	Acceptable
Total Organic Carbon (TOC)	RBLK	N/A	0	mg/L	< 0.2				0.2	N/A	09/02/04	Acceptable

StarLims Run 78862 includes the following BSK Sample ID#:

488202 488205 489331 490524 490983 490987 490988 491140 491141 491142 491272 491273 491274 491275 491558 491559
 491560 491561 491562 491563 491564

Approved by: *Cynthia Ann Hoy*

%Rec: Percent Recovered
 RPD: Relative Percent Difference
 UCL: Upper Control Limit
 LCL: Lower Control Limit
 LCS: Laboratory Control Sample
 LCSD: Laboratory Control Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD
 OOS-High: QC Result Above UCL
 OOS-Low: QC Result Below LCL
 MS: Matrix Spike
 MSD: Matrix Spike Duplicate
 RBLK: Reagent (Method) Blank

Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

BSK ANALYTICAL LABORATORIES



QC Summary Report

10/14/2004

NELAP Certificate #04227CA
ELAP Certificate #1180

BSK Submission : 2004092146
Client : Pacific EcoRisk
Date Submitted : 09/30/2004
Project ID :

Project Desc : East San Joaquin River Watershed Coalition

BSK StarLims Run #: 80400



Instrument ID: PH1

Analyst Initials: MARIAM

Method Number: ALK

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Alkalinity (as CaCO3)	LCS	N/A	105	mg/L	105		100	ND	120	80	09/30/04	Acceptable
Alkalinity (as CaCO3)	LCS	N/A	106	mg/L	106	0.95	100	ND	120	80	09/30/04	Acceptable
Alkalinity (as CaCO3)	LDUP	502358	607	mg/L	0			610	10	N/A	09/30/04	Acceptable
Bicarbonate (as CaCO3)	LDUP	502358	607	mg/L	0			610	10	N/A	09/30/04	Acceptable
Carbonate (as CaCO3)	LDUP	502358	0	mg/L	N/A			ND	10	N/A	09/30/04	Acceptable
Conductivity - Specific (BC)	LDUP	502358	1184	µmho/c				1200	20	N/A	09/30/04	Acceptable
	LDUP	502348	539	µmho/c	0			530	20	N/A	09/30/04	Acceptable
Hydroxide (as CaCO3)	LDUP	502358	0	mg/L	N/A			ND	10	N/A	09/30/04	Acceptable
pH	LDUP	502358	7.75	Std. Unit	0			7.7	20	N/A	09/30/04	Acceptable
Alkalinity (as CaCO3)	RBLK	N/A	0	mg/L	<1				1	N/A	09/30/04	Acceptable
Bicarbonate (as CaCO3)	RBLK	N/A	0	mg/L	<1				1	N/A	09/30/04	Acceptable
Carbonate (as CaCO3)	RBLK	N/A	0	mg/L	<1				1	N/A	09/30/04	Acceptable
Conductivity - Specific (BC)	RBLK	N/A	0	µmho/c	<1				1	N/A	09/30/04	Acceptable
Hydroxide (as CaCO3)	RBLK	N/A	0	mg/L	<1				1	N/A	09/30/04	Acceptable

StarLims Run 80400 includes the following BSK Sample ID# :

502187 502188 502189 502190 502191 502192 502193 502194 502348 502358 502445 502481 502482 502483 502484 502532
502533 502534 502535 502703 502704 502705 502706 502730 502731 502732

BSK StarLims Run #: 80419



Instrument ID:

Analyst Initials: LUEV

Method Number: COLOR

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Color (A.P.H.A)	LDUP	502532	0	units	N/A			ND	20	N/A	09/30/04	Acceptable
Odor	LDUP	502532	1	TON	0			1.0	20	N/A	09/30/04	Acceptable
Turbidity	LDUP	502532	0.2	NTU	0			0.20	20	N/A	09/30/04	Acceptable
Color (A.P.H.A)	RBLK	N/A	0	units	<1				1	N/A	09/30/04	Acceptable
Odor	RBLK	N/A	1	TON	<1				1	N/A	09/30/04	Acceptable
Turbidity	RBLK	N/A	0.04	NTU	<0.1				0.1	N/A	09/30/04	Acceptable

%Rec: Percent Recovered
RPD: Relative Percent Difference
UCL: Upper Control Limit
LCL: Lower Control Limit
LCS: Laboratory Control Sample
LCSD: Laboratory Control Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD
OOS-High: QC Result Above UCL
OOS-Low: QC Result Below LCL
MS: Matrix Spike
MSD: Matrix Spike Duplicate
RBLK: Reagent (Method) Blank

Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

QC Summary Report

10/14/2004



BSK Submission : 2004092146
 Client : Pacific EcoRisk
 Date Submitted : 09/30/2004
 Project ID :

NELAP Certificate #04227CA
 ELAP Certificate #1180

Project Desc : East San Joaquin River Watershed Coalition

StarLims Run 80419 includes the following BSK Sample ID# :

502481 502482 502483 502484 502532 502533 502534 502535 502697 502749 502750 502751 502752 502823 502824 502825
 502863 502864

BSK StarLims Run #: 80604



Instrument ID: BALANCE1

Analyst Initials: LUEV

Method Number: TDS

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date
Total Dissolved Solids (TDS)	LDUP	502149	2400	mg/L	0			2400	20	N/A	10/06/04 <i>Acceptable</i>
Total Dissolved Solids (TDS)	RBLK	N/A	3	mg/L	< 5				5	N/A	10/06/04 <i>Acceptable</i>

StarLims Run 80604 includes the following BSK Sample ID# :

502149 502150 502151 502152 502167 502168 502203 502358 502445 502481 502482 502483 502484 502532 502533 502534
 502535 502697 502742 502743 503984 503985

BSK StarLims Run #: 80827



Instrument ID:

Analyst Initials: VONGH

Method Number: TOC

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date
Total Organic Carbon (TOC)	LCS	N/A	5.1	mg/L	102		5.0	ND	120	80	10/06/04 <i>Acceptable</i>
Total Organic Carbon (TOC)	LCSD	N/A	5.2	mg/L	104	2	5.0	ND	120	80	10/06/04 <i>Acceptable</i>
Total Organic Carbon (TOC)	MS	502742	6.6	mg/L	104		4.0	2.3	120	80	10/06/04 <i>Acceptable</i>
Total Organic Carbon (TOC)	MSD	502742	6.6	mg/L	104	0.0	4.0	2.3	120	80	10/06/04 <i>Acceptable</i>
Total Organic Carbon (TOC)	RBLK	N/A	0	mg/L	< 0.2				0.2	N/A	10/06/04 <i>Acceptable</i>

StarLims Run 80827 includes the following BSK Sample ID# :

502146 502147 502148 502149 502150 502152 502486 502487 502488 502700 502701 502702 502742 502743 502744 502745
 503028 503029 505626 505627 505628 505629 505630

BSK StarLims Run #: 81017



Instrument ID:

Analyst Initials: VONGH

Method Number: TOC

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date
Total Organic Carbon (TOC)	LCS	N/A	5.1	mg/L	102		5.0	ND	120	80	10/08/04 <i>Acceptable</i>
Total Organic Carbon (TOC)	LCSD	N/A	5.1	mg/L	102	0.0	5.0	ND	120	80	10/08/04 <i>Acceptable</i>

%Rec: Percent Recovered
 RPD: Relative Percent Difference
 UCL: Upper Control Limit
 LCL: Lower Control Limit
 LCS: Laboratory Control Sample
 LCSD: Laboratory Control Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD
 OOS-High: QC Result Above UCL
 OOS-Low: QC Result Below LCL
 MS: Matrix Spike
 MSD: Matrix Spike Duplicate
 RBLK: Reagent (Method) Blank

Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

BSK ANALYTICAL LABORATORIES



QC Summary Report

10/14/2004



BSK Submission : 2004092146
 Client : Pacific EcoRisk
 Date Submitted : 09/30/2004
 Project ID :

NELAP Certificate #04227CA
 ELAP Certificate #1180

Project Desc : East San Joaquin River Watershed Coalition

BSK StarLims Run #: 81017



Instrument ID:

Analyst Initials: VONGH

Method Number: TOC

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Total Organic Carbon (TOC)	MS	500721	5.9	mg/L	105		4.0	1.7	120	80	10/08/04	Acceptable
	MS	503210	8.6	mg/L	113		4.0	3.6	120	80	10/08/04	Acceptable
Total Organic Carbon (TOC)	MSD	500721	5.9	mg/L	105	0.0	4.0	1.7	120	80	10/08/04	Acceptable
	MSD	503210	8.6	mg/L	113	0.0	4.0	3.6	120	80	10/08/04	Acceptable
Total Organic Carbon (TOC)	RBLK	N/A	0	mg/L	< 0.2				0.2	N/A	10/08/04	Acceptable

StarLims Run 81017 includes the following BSK Sample ID#:

497598 499891 500018 500019 500020 500721 502151 502485 502497 502498 502499 503137 503210 503211 503495 503496
 503497 503809 503810 503923 506539 506540 506541 506542 506543 506544 506545

Approved by: Cynthia Hamilton

%Rec: Percent Recovered
 RPD: Relative Percent Difference
 UCL: Upper Control Limit
 LCL: Lower Control Limit
 LCS: Laboratory Control Sample
 LCSD: Laboratory Control Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD
 OOS-High: QC Result Above UCL
 OOS-Low: QC Result Below LCL
 MS: Matrix Spike
 MSD: Matrix Spike Duplicate
 RBLK: Reagent (Method) Blank

Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

Method Blank
EPA 8081A Pyrethroids WATER

Blank Name/QCG: 040804W-73373 - 78222
Batch ID: \$81PY-040804A

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Sample Type	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
BLANK	Bifenthrin	Not detected	0.02	ug/L	8/4/04	8/5/04
BLANK	Cyfluthrin	Not detected	0.03	ug/L	8/4/04	8/5/04
BLANK	Cypermethrin	Not detected	0.10	ug/L	8/4/04	8/5/04
BLANK	Esfenvalerate/Fenvalerate	Not detected	0.02	ug/L	8/4/04	8/5/04
BLANK	Lambda cyhalothrin	Not detected	0.02	ug/L	8/4/04	8/5/04
BLANK	Permethrin	Not detected	0.02	ug/L	8/4/04	8/5/04
BLANK	Surrogate: DECA	64.7	25-143	%	8/4/04	8/5/04
BLANK	Surrogate: TCmX	35.3	25-144	%	8/4/04	8/5/04

Run #: 59
Instrument: LUCY
Sequence: 040804
Initials: SA

Printed: 8/7/04 10:02:19 AM

Laboratory Control Spike Recovery
EPA 8081A Pyrethroids WATER

APPL ID: 040804W-73373 LCS - 78222
 Batch ID: \$81PY-040804A

APPL Inc.
 4203 West Swift Avenue
 Fresno, CA 93722

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
Bifenthrin	0.200	0.187	93.5	65-135
Cyfluthrin	0.200	0.193	96.5	65-135
Cypermethrin	1.00	0.945	94.5	65-135
Esfenvalerate/Fenvalerate	0.200	0.189	94.5	65-135
Lambda cyhalothrin	0.200	0.181	90.5	65-135
Permethrin	0.200	0.187	93.5	65-135
Surrogate: DECA	0.300	0.225	75.0	25-143
Surrogate: TCmX	0.300	0.113	37.7	25-144

Comments:

Primary	SPK
Extraction Date :	8/4/04
Analysis Date :	8/5/04
Instrument :	LUCY
Run :	60
Initials :	SA

Printed: 8/7/04 10:02:20 AM

APPL Standard LCS

Matrix Spike Recoveries
EPA 8081A Pyrethroids WATER

APPL ID: 040804W-73373 MS - 78222
 Batch ID: \$81PY-040804A

APPL Inc.
 4203 West Swift Avenue
 Fresno, CA 93722

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
Bifenthrin	0.400	ND	0.352	0.341	88.0	85.3	65-135	3.2	25
Cyfluthrin	0.400	ND	0.368	0.343	92.0	85.8	65-135	7.0	25
Cypermethrin	2.00	ND	1.80	1.72	90.0	86.0	65-135	4.5	25
Esfenvalerate/Fenvalerate	0.400	ND	0.365	0.348	91.2	87.0	65-135	4.8	25
Lambda cyhalothrin	0.400	ND	0.358	0.338	89.5	84.5	65-135	5.7	25
Permethrin	0.400	ND	0.376	0.474	94.0	118	65-135	23,1	25
Surrogate: DECA	0.600	NA	0.422	0.415	70.3	69.2	25-143		
Surrogate: TCmX	0.600	NA	0.339	0.299	56.5	49.8	25-144		

Comments:

Primary	SPK	DUP
Extraction Date :	8/4/04	8/4/04
Analysis Date :	8/5/04	8/5/04
Instrument :	LUCY	LUCY
Run :	61	62
Initials :	SA	

Printed: 8/9/04 4:45:49 PM
 APPL Standard MSD

Method Blank
EPA 8141A OP Pesticide Water

Blank Name/QCG: 040803W-73366 - 78357
 Batch ID: \$84AG-040803A

APPL Inc.
 4203 West Swift Avenue
 Fresno, CA 93722

Sample Type	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
BLANK	Azinphosmethyl	Not detected	1.0	ug/L	8/3/04	8/11/04
BLANK	Bolstar	Not detected	0.10	ug/L	8/3/04	8/11/04
BLANK	Chlorpyrifos	Not detected	0.05	ug/L	8/3/04	8/11/04
BLANK	Coumaphos	Not detected	0.20	ug/L	8/3/04	8/11/04
BLANK	Def	Not detected	0.10	ug/L	8/3/04	8/11/04
BLANK	Demeton-S	Not detected	0.20	ug/L	8/3/04	8/11/04
BLANK	Diazinon	Not detected	0.05	ug/L	8/3/04	8/11/04
BLANK	Dichlorvos	Not detected	0.20	ug/L	8/3/04	8/11/04
BLANK	Dimethoate	Not detected	0.10	ug/L	8/3/04	8/11/04
BLANK	Disulfoton	Not detected	0.10	ug/L	8/3/04	8/11/04
BLANK	EPN	Not detected	0.10	ug/L	8/3/04	8/11/04
BLANK	EPTC	Not detected	0.10	ug/L	8/3/04	8/11/04
BLANK	Ethion	Not detected	0.10	ug/L	8/3/04	8/11/04
BLANK	Ethoprop	Not detected	0.10	ug/L	8/3/04	8/11/04
BLANK	Fenamiphos	Not detected	1.0	ug/L	8/3/04	8/11/04
BLANK	Fensulfothion	Not detected	0.50	ug/L	8/3/04	8/11/04
BLANK	Fenthion	Not detected	0.10	ug/L	8/3/04	8/11/04
BLANK	Malathion	Not detected	0.10	ug/L	8/3/04	8/11/04
BLANK	Merphos	Not detected	0.10	ug/L	8/3/04	8/11/04
BLANK	Mevinphos	Not detected	0.70	ug/L	8/3/04	8/11/04
BLANK	Naled	Not detected	0.50	ug/L	8/3/04	8/11/04
BLANK	Parathion, ethyl	Not detected	0.10	ug/L	8/3/04	8/11/04
BLANK	Parathion, methyl	Not detected	0.10	ug/L	8/3/04	8/11/04
BLANK	Phorate	Not detected	0.10	ug/L	8/3/04	8/11/04
BLANK	Prowl	Not detected	0.10	ug/L	8/3/04	8/11/04
BLANK	Ronnel	Not detected	0.10	ug/L	8/3/04	8/11/04
BLANK	Stirophos	Not detected	0.10	ug/L	8/3/04	8/11/04
BLANK	Tokuthion	Not detected	0.10	ug/L	8/3/04	8/11/04
BLANK	Trichloronate	Not detected	0.10	ug/L	8/3/04	8/11/04
BLANK	Trifluralin	Not detected	0.10	ug/L	8/3/04	8/11/04
BLANK	Surrogate: Tributylphosphate	92.3	60-150	%	8/3/04	8/11/04
BLANK	Surrogate: Triphenylphosphate	81.1	56-129	%	8/3/04	8/11/04

Run #: 13,13
Instrument: NPD04,03
Sequence: 040811,12
Initials: SS

Printed: 8/19/04 7:48:32 AM

Laboratory Control Spike Recovery
EPA 8141A OP Pesticide Water

APPL ID: 040803W-73366 LCS - 78357
 Batch ID: \$84AG-040803A

APPL Inc.
 4203 West Swift Avenue
 Fresno, CA 93722

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
Azinphosmethyl	1.00	0.844	84.4	36-189
Bolstar	0.500	0.369	73.8	43-119
Chlorpyrifos	0.500	0.393	78.6	61-125
Coumaphos	2.50	2.12	84.8	60-124
Def	1.00	0.901	90.1	60-118
Demeton-S	0.151	0.072	47.7	12-85
Diazinon	0.500	0.416	83.2	57-130
Dichlorvos	0.500	0.503	101	46-141
Dimethoate	0.500	0.641	128	68-202
Disulfoton	0.500	0.381	76.2	47-117
EPN	0.500	0.488	97.6	57-133
EPTC	0.500	0.332	66.4	39-133
Ethion	0.500	0.442	88.4	65-134
Ethoprop	0.500	0.406	81.2	65-125
Fenamiphos	1.50	1.57	105	40-135
Phosphorothion	2.50	2.36	94.4	54-161
Fenthion	0.500	0.438	87.6	50-118
Malathion	0.500	0.454	90.8	47-125
Merphos	1.00	0.942	94.2	54-114
Mevinphos	1.00	1.50	150	43-205
Naled	2.00	1.17	58.5	10-67
Parathion, ethyl	0.500	0.482	96.4	62-123
Parathion, methyl	0.500	0.440	88.0	55-164
Phorate	0.500	0.368	73.6	22-96
Prowl	0.500	0.412	82.4	63-129
Ronnel	0.500	0.432	86.4	53-114

Comments:

Primary	SPK
Extraction Date :	8/3/04
Analysis Date :	8/11/04
Instrument :	NPD04,03
Run :	15,14,14
Initials :	SS

Printed: 8/19/04 7:48:30 AM

APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8141A OP Pesticide Water

APPL ID: 040803W-73366 LCS - 78357
 Batch ID: \$84AG-040803A

APPL Inc.
 4203 West Swift Avenue
 Fresno, CA 93722

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
Stirophos	1.00	0.972	97.2	68-128
Tokuthion	0.500	0.352	70.4	56-123
Trichloronate	0.500	0.415	83.0	43-113
Trifluralin	0.500	0.343	68.6	44-117
Surrogate: Tributylphosphate	1.00	0.975	97.5	60-150
Surrogate: Triphenylphosphate	1.00	0.901	90.1	56-129

Comments: _____

Primary	SPK
Extraction Date :	8/3/04
Analysis Date :	8/11/04
Instrument :	NPD04,03
Run :	15,14
Initials :	SS

Printed: 8/13/04 3:38:17 PM

APPL Standard LCS

Matrix Spike Recoveries EPA 8141A OP Pesticide Water

APPL ID: 040803W-73366 MS - 78357
Batch ID: \$84AG-040803A

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
Azinphosmethyl	2.00	ND	2.16	2.08	108	104	36-189	3.8	25
Bolstar	1.00	ND	0.840	0.766	84.0	76.6	43-119	9.2	25
Chlorpyrifos	1.00	0.017	0.920	1.03	90.3	101	61-125	11.3	25
Coumaphos	5.00	ND	5.15	5.34	103	107	60-124	3.6	25
Def	2.00	ND	1.96	1.81	98.0	90.5	60-118	8.0	25
Demeton-S	0.302	ND	0.249	0.230	82.5	76.2	12-85	7.9	25
Diazinon	1.00	ND	0.896	0.869	89.6	86.9	57-130	3.1	25
Dichlorvos	1.00	ND	1.05	0.931	105	93.1	46-141	12.0	25
Dimethoate	1.00	0.062	1.84	1.71	178	165	68-202	7.3	25
Disulfoton	1.00	ND	1.06	0.995	106	99.5	47-117	6.3	25
EPN	1.00	ND	1.22	1.30	122	130	57-133	6.3	25
EPTC	1.00	ND	0.978	0.872	97.8	87.2	39-133	11.5	25
Ethion	1.00	ND	1.08	1.16	108	116	65-134	7.1	25
Ethoprop	1.00	ND	0.903	0.838	90.3	83.8	65-125	7.5	25
fenamiphos	3.00	ND	2.31	2.78	77.0	92.7	40-135	18.5	25
Fensulfothion	5.00	ND	6.03	5.98	121	120	54-161	0.83	25
Fenthion	1.00	ND	1.04	1.05	104	105	50-118	0.96	25
Malathion	1.00	ND	1.19	1.21	119	121	47-125	1.7	25
Merphos	2.00	ND	2.22	2.28	111	114	54-114	2.7	25
Mevinphos	2.00	ND	3.50	3.23	175	162	43-205	8.0	25
Naled	4.00	ND	2.71	2.51	67.8 #	62.7	10-67	7.7	25
Parathion, ethyl	1.00	ND	1.07	1.07	107	107	62-123	0.0	25
Parathion, methyl	1.00	ND	1.07	0.987	107	98.7	55-164	8.1	25
Phorate	1.00	ND	0.833	0.740	83.3	74.0	22-96	11.8	25
Prowl	1.00	ND	0.941	0.865	94.1	86.5	63-129	8.4	25

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Extraction Date :	8/3/04	8/3/04
Analysis Date :	8/7/04	8/7/04
Instrument :	NPD04,03	NPD04,03
Run :	22,41,15	23,42,16
Initials :	SS	

Printed: 8/19/04 7:48:27 AM
APPL Standard MSD

Matrix Spike Recoveries EPA 8141A OP Pesticide Water

APPL ID: 040803W-73366 MS - 78357

Batch ID: \$84AG-040803A

APPL Inc.

4203 West Swift Avenue

Fresno, CA 93722

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
Ronnel	1.00	ND	0.989	0.994	98.9	99.4	53-114	0.50	25
Stirophos	2.00	ND	1.99	2.15	99.5	108	68-128	7.7	25
Tokuthion	1.00	ND	0.820	0.760	82.0	76.0	56-123	7.6	25
Trichloronate	1.00	ND	1.12	1.14	112	114 #	43-113	1.8	25
Trifluralin	1.00	0.37	1.33	1.21	96.0	84.0	44-117	9.4	25
Surrogate: Tributylphosphate	2.00	NA	2.03	1.88	101	94.0	60-150		25
Surrogate: Triphenylphosphate	2.00	NA	1.82	1.65	91.0	82.5	56-129		25

= Recovery is outside QC limits.

Comments: _____

Primary	SPK	DUP
Extraction Date :	8/3/04	8/3/04
Analysis Date :	8/7/04	8/7/04
Instrument :	NPD04,03	NPD04,03
Run :	22,41,15	23,42,16
Initials :	SS	

Printed: 8/13/04 3:40:06 PM
APPL Standard MSD

Method Blank
EPA 8081A Pyrethroids WATER

Blank Name/QCG: 040907W-74807 - 79206
Batch ID: \$81PY-040907A

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Sample Type	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
BLANK	Bifenthrin	Not detected	0.02	ug/L	9/7/04	9/11/04
BLANK	Cyfluthrin	Not detected	0.03	ug/L	9/7/04	9/11/04
BLANK	Cypermethrin	Not detected	0.10	ug/L	9/7/04	9/11/04
BLANK	Esfenvalerate/Fenvalerate	Not detected	0.02	ug/L	9/7/04	9/11/04
BLANK	Lambda cyhalothrin	Not detected	0.02	ug/L	9/7/04	9/11/04
BLANK	Permethrin	Not detected	0.02	ug/L	9/7/04	9/11/04
BLANK	Surrogate: DECA	71.6	25-143	%	9/7/04	9/11/04
BLANK	Surrogate: TCmX	40.0	25-144	%	9/7/04	9/11/04

Run #: 155
Instrument: LUCY
Sequence: 040909
Initials: SA

GC SC-Blank
Printed: 9/21/04 3:22:42 PM

Laboratory Control Spike Recovery EPA 8081A Pyrethroids WATER

APPL ID: 040907W-74807 LCS - 79206
Batch ID: \$81PY-040907A

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
Bifenthrin	0.250	0.209	83.6	65-135
Cyfluthrin	0.250	0.232	92.8	65-135
Cypermethrin	1.25	1.12	89.6	65-135
Esfenvalerate/Fenvalerate	0.250	0.225	90.0	65-135
Lambda cyhalothrin	0.250	0.221	88.4	65-135
Permethrin	0.250	0.205	82.0	65-135
Surrogate: DECA	0.300	0.199	66.3	25-143
Surrogate: TCmX	0.300	0.0575	19.2 #	25-144

= Recovery is outside QC limits.

Comments:

Primary	SPK
Extraction Date :	9/7/04
Analysis Date :	9/11/04
Instrument :	LUCY
Run :	156
Initials :	SA

Printed: 9/21/04 3:22:43 PM

APPL Standard LCS

Matrix Spike Recoveries

EPA 8081A Pyrethroids WATE R

APPL ID: 040907W-74807 MS - 79206
 Batch ID: \$81PY-040907A

APPL Inc.
 4203 West Swift Avenue
 Fresno, CA 93722

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
Bifenthrin	0.250	ND	0.210	0.220	84.0	88.0	65-135	4.7	25
Cyfluthrin	0.250	ND	0.234	0.258	93.6	103	65-135	9.8	25
Cypermethrin	1.25	ND	1.10	1.17	88.0	93.6	65-135	6.2	25
Esfenvalerate/Fenvalerate	0.250	ND	0.221	0.231	88.4	92.4	65-135	4.4	25
Lambda cyhalothrin	0.250	ND	0.219	0.234	87.6	93.6	65-135	6.6	25
Permethrin	0.250	ND	0.197	0.231	78.8	92.4	65-135	15.9	25
Surrogate: DECA	0.300	NA	0.193	0.198	64.3	66.0	25-143		
Surrogate: TCmX	0.300	NA	0.153	0.149	51.0	49.7	25-144		

Comments:

Primary	SPK	DUP
Extraction Date :	9/7/04	9/7/04
Analysis Date :	9/11/04	9/11/04
Instrument :	LUCY	LUCY
Run :	157	158
Initials :	SA	

Printed: 9/21/04 3:22:44 PM
 APPL MSD SCII

Method Blank
EPA 8141A OP Pesticide Water

Blank Name/QCG: 040907W-74811 - 79273
Batch ID: \$84AG-040907A

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Sample Type	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
BLANK	Chlorpyrifos	Not detected	0.05	ug/L	9/7/04	9/18/04
BLANK	Diazinon	Not detected	0.05	ug/L	9/7/04	9/18/04
BLANK	Surrogate: Tributylphosphate	106	60-150	%	9/7/04	9/18/04
BLANK	Surrogate: Triphenylphosphate	90.1	56-129	%	9/7/04	9/18/04

Run #: 35
Instrument: NPD03
Sequence: 040917
Initials: EM

Printed: 9/20/04 11:54:16 AM

Laboratory Control Spike Recovery EPA 8141A OP Pesticide Water

APPL ID: 040907W-74811 LCS - 79273
Batch ID: \$84AG-040907A

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
Chlorpyrifos	0.500	0.445	89.0	61-125
Diazinon	0.500	0.448	89.6	57-130
Surrogate: Tributylphosphate	1.00	1.06	106	60-150
Surrogate: Triphenylphosphate	1.00	0.976	97.6	56-129

Comments: _____

<u>Primary</u>	<u>SPK</u>
Extraction Date :	9/7/04
Analysis Date :	9/18/04
Instrument :	NPD03
Run :	36
Initials :	EM

Printed: 9/20/04 11:54:16 AM

APPL Standard LCS

Matrix Spike Recoveries

EPA 8141A OP Pesticide Water

APPL ID: 040907W-74811 MS - 79273
 Batch ID: \$84AG-040907A

APPL Inc.
 4203 West Swift Avenue
 Fresno, CA 93722

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
Chlorpyrifos	0.500	ND	0.423	0.432	84.6	86.4	61-125	2.1	25
Diazinon	0.500	ND	0.425	0.418	85.0	83.6	57-130	1.7	25
Surrogate: Tributylphosphate	1.00	NA	1.02	1.01	102	101	60-150		
Surrogate: Triphenylphosphate	1.00	NA	0.886	0.868	88.6	86.8	56-129		

Comments:

Primary	SPK	DUP
Extraction Date :	9/7/04	9/7/04
Analysis Date :	9/18/04	9/18/04
Instrument :	NPD03	NPD03
Run :	37	38
Initials :	EM	

Printed: 9/20/04 11:54:17 AM
 APPL Standard MSD

Method Blank
EPA 8081A Pyrethroids WATER

Blank Name/QCG: 041005W-76058 - 80280
Batch ID: \$81PY-041005A

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Sample Type	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
BLANK	Cypermethrin	Not detected	0.10	ug/L	10/5/04	10/15/04
BLANK	Esfenvalerate/Fenvalerate	Not detected	0.02	ug/L	10/5/04	10/15/04
BLANK	Lambda cyhalothrin	Not detected	0.02	ug/L	10/5/04	10/15/04
BLANK	Permethrin	Not detected	0.02	ug/L	10/5/04	10/15/04
BLANK	Surrogate: DECA	84.0	25-143	%	10/5/04	10/15/04
BLANK	Surrogate: TCmX	42.4	25-144	%	10/5/04	10/15/04

Run #: 58
Instrument: LUCY
Sequence: 041014
Initials: SA

GC SC-Blank-REG MDLs
Printed: 10/19/04 4:17:02 PM

Laboratory Control Spike Recovery

EPA 8081A Pyrethroids WATER

APPL ID: 041005W-76058 LCS - 80280

Batch ID: \$81PY-041005A

APPL Inc.

4203 West Swift Avenue

Fresno, CA 93722

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
Cypermethrin	1.25	1.07	85.6	65-135
Esfenvalerate/Fenvalerate	0.250	0.210	84.0	65-135
Lambda cyhalothrin	0.250	0.205	82.0	65-135
Permethrin	0.250	0.277	111	65-135
Surrogate: DECA	0.300	0.256	85.3	25-143
Surrogate: TCmX	0.300	0.174	58.0	25-144

Comments:

<u>Primary</u>	<u>SPK</u>
Extraction Date :	10/5/04
Analysis Date :	10/15/04
Instrument :	LUCY
Run :	59
Initials :	SA

Printed: 10/19/04 4:17:03 PM

APPL Standard LCS

Matrix Spike Recoveries

EPA 8081A Pyrethroids WATE

APPL ID: 041005W-76058 MS - 80280
 Batch ID: \$81PY-041005A

APPL Inc.
 4203 West Swift Avenue
 Fresno, CA 93722

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
Cypermethrin	1.25	ND	1.14	1.26	91.2	101	65-135	10.0	25
Esfenvalerate/Fenvalerate	0.250	ND	0.214	0.249	85.6	99.6	65-135	15.1	25
Lambda cyhalothrin	0.250	ND	0.244	0.226	97.6	90.4	65-135	7.7	25
Permethrin	0.250	ND	0.193	0.186	77.2	74.4	65-135	3.7	25
Surrogate: DECA	0.300	NA	0.238	0.253	79.3	84.3	25-143		
Surrogate: TCmX	0.300	NA	0.175	0.210	58.3	70.0	25-144		

Comments: _____

Primary	SPK	DUP
Extraction Date :	10/5/04	10/5/04
Analysis Date :	10/15/04	10/15/04
Instrument :	LUCY	LUCY
Run :	60	61
Initials :	SA	

Printed: 10/19/04 4:17:04 PM
 APPL MSD SCII

Method Blank
EPA 8141A OP Pesticide Water

Blank Name/QCG: 041005W-76061 - 80160
Batch ID: \$84AG-041005A

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Sample Type	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
BLANK	Chlorpyrifos	Not detected	0.05	ug/L	10/5/04	10/15/04
BLANK	Diazinon	Not detected	0.05	ug/L	10/5/04	10/15/04
BLANK	Surrogate: Tributylphosphate	97.0	60-150	%	10/5/04	10/15/04
BLANK	Surrogate: Triphenylphosphate	92.0	56-129	%	10/5/04	10/15/04

Run #: 23
Instrument: NPD03
Sequence: 041014
Initials: EM

GC SC-Blank-REG MDLs
Printed: 10/15/04 11:06:01 AM

Laboratory Control Spike Recovery
EPA 8141A OP Pesticide Water

APPL ID: 041005W-76061 LCS - 80160
 Batch ID: \$84AG-041005A

APPL Inc.
 4203 West Swift Avenue
 Fresno, CA 93722

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
Chlorpyrifos	0.500	0.474	94.8	61-125
Diazinon	0.500	0.481	96.2	57-130
Surrogate: Tributylphosphate	1.00	1.12	112	60-150
Surrogate: Triphenylphosphate	1.00	0.955	95.5	56-129

Comments:

Primary	SPK
Extraction Date :	10/5/04
Analysis Date :	10/15/04
Instrument :	NPD03
Run :	24
Initials :	EM

Printed: 10/15/04 11:06:03 AM
 APPL Standard LCS

Matrix Spike Recoveries
EPA 8141A OP Pesticide Wate

APPL ID: 041005W-76061 MS - 80160
 Batch ID: \$84AG-041005A

APPL Inc.
 4203 West Swift Avenue
 Fresno, CA 93722

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
Chlorpyrifos	0.500	0.026	0.459	0.453	86.6	85.4	61-125	1.3	25
Diazinon	0.500	ND	0.439	0.435	87.8	87.0	57-130	0.92	25
Surrogate: Tributylphosphate	1.00	NA	1.07	1.04	107	104	60-150		
Surrogate: Triphenylphosphate	1.00	NA	0.950	0.954	95.0	95.4	56-129		

Comments:

Primary	SPK	DUP
Extraction Date :	10/5/04	10/5/04
Analysis Date :	10/15/04	10/15/04
Instrument :	NPD03	NPD03
Run :	25	26
Initials :	EM	

Printed: 10/15/04 11:06:06 AM
 APPL MSD SCII

CETIS Report

Phytoplankton Growth Inhibition Test **Pacific EcoRisk**

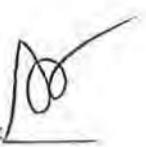
Test: 06-8737-2071	Test Type: Cell Growth	Species: Selenastrum capricornutum
Start Date: 01 Aug-04 03:00 PM	Protocol: EPA/600/4-91/002 (1994)	Source: In-House Culture
End Date: 05 Aug-04 09:20 AM	Dil Water: Mod-Hard Synthetic Water	
Setup Date: 01 Aug-04 03:00 PM	Brine:	

Sample: 10-6449-7999	Material: Ambient Water	Client: San Joaquin Valley Drainage Authority
Sampled: 31 Jul-04 02:40 PM	Code: 9466	Project: Ag Waiver
Received: 31 Jul-04 02:40 PM	Source: San Joaquin Valley Drainage Authority	Latitude:
Temp °C: 3.3	Station: 01-MRFSD-013	Longitude:

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
07-8853-3456	Cell Density	100	>100	N/A	26.40%	Equal Variance t

Cell Density Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	4	591500	516000	768000	59150.232	118300.46	20.00%
100		4	1534250	1383000	1626000	54401.861	108803.72	7.09%

Cell Density Detail						
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Lab Water Co	545000	537000	516000	768000	
100		2E+06	2E+06	1E+06	2E+06	

Approved By: 

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 30 Sep-04 11:04 AM
 Link: 08-0152-3490

Phytoplankton Growth Inhibition Test	Pacific EcoRisk
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Test: 06-8737-2071	Test Type: Cell Growth	Species: Selenastrum capricornutum
Start Date: 01 Aug-04 03:00 PM	Protocol: EPA/600/4-91/002 (1994)	Source: In-House Culture
End Date: 05 Aug-04 09:20 AM	Dil Water: Mod-Hard Synthetic Water	
Setup Date: 01 Aug-04 03:00 PM	Brine:	

Sample: 09-6632-4610	Material: Ambient Water	Client: San Joaquin Valley Drainage Authority
Sampled: 31 Jul-04 11:58 AM	Code: 9466	Project: Ag Waiver
Received: 31 Jul-04 11:58 AM	Source: San Joaquin Valley Drainage Authority	Latitude:
Temp °C: 3.2	Station: 01-DSAGR-020	Longitude:

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
13-7914-8208	Cell Density	100	>100	N/A	35.35%	Equal Variance t

Cell Density Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	4	591500	516000	768000	59150.232	118300.46	20.00%
100		4	2775500	2553000	2993000	89885.575	179771.15	6.48%

Cell Density Detail						
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Lab Water Co	545000	537000	516000	768000	
100		3E+06	3E+06	3E+06	3E+06	

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 30 Sep-04 11:06 AM
 Link: 09-9421-5044

Phytoplankton Growth Inhibition Test	Pacific EcoRisk
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Test: 06-8737-2071	Test Type: Cell Growth	Species: Selenastrum capricornutum
Start Date: 01 Aug-04 03:00 PM	Protocol: EPA/600/4-91/002 (1994)	Source: In-House Culture
End Date: 05 Aug-04 09:20 AM	Dil Water: Mod-Hard Synthetic Water	
Setup Date: 01 Aug-04 03:00 PM	Brine:	

Sample: 19-0258-0755	Material: Ambient Water	Client: San Joaquin Valley Drainage Authority
Sampled: 31 Jul-04 10:50 AM	Code: 9466	Project: Ag Waiver
Received: 31 Jul-04 10:50 AM	Source: San Joaquin Valley Drainage Authority	Latitude:
Temp °C: 3.8	Station: 01-DCAGR-036	Longitude:

Comparison Summary

Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
02-6206-9379	Cell Density	100	>100	N/A	23.78%	Equal Variance t

Cell Density Summary

Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	4	591500	516000	768000	59150.232	118300.46	20.00%
100		4	3088500	2979000	3157000	41718.301	83436.603	2.70%

Cell Density Detail

Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Lab Water Co	545000	537000	516000	768000
100		3E+06	3E+06	3E+06	3E+06

Approved By: 

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 06 Aug-04 12:20 PM
 Link: 09-3593-7783

Acute Ceriodaphnia Survival Test	Pacific EcoRisk
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Test: 07-7056-9957	Test Type: Survival (48h)	Species: Ceriodaphnia dubia
Start Date: 01 Aug-04 06:00 PM	Protocol: EPA-821-R-02-012 (2002)	Source: In-House Culture
End Date: 05 Aug-04 05:00 PM	Dil Water: Spring Water	
Setup Date: 01 Aug-04 06:00 PM	Brine: Not Applicable	

Sample: 10-8934-4406	Material: Ambient Water	Client: San Joaquin Valley Drainage Authority
Sampled: 31 Jul-04 04:05 PM	Code: 9466	Project: Ag Waiver
Received: 31 Jul-04 04:05 PM	Source: San Joaquin Valley Drainage Authority	Latitude:
Temp °C: 5.7	Station: 01-ARDCL-007	Longitude:

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
01-9596-0678	48h Proportion Survived	100	>100	N/A	7.69%	Mann-Whitney U

48h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	4	0.95	0.8	1	0.0500000	0.1	10.53%
100		4	1	1	1	0	0	0.00%

48h Proportion Survived Detail					
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Lab Water Co	1	1	1	0.8
100		1	1	1	1

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 06 Aug-04 12:19 PM
 Link: 03-2966-2812

Acute Ceriodaphnia Survival Test Pacific EcoRisk

Test: 07-7056-9957	Test Type: Survival (48h)	Species: Ceriodaphnia dubia
Start Date: 01 Aug-04 06:00 PM	Protocol: EPA-821-R-02-012 (2002)	Source: In-House Culture
End Date: 05 Aug-04 05:00 PM	Dil Water: Spring Water	
Setup Date: 01 Aug-04 06:00 PM	Brine: Not Applicable	

Sample: 10-6449-7999	Material: Ambient Water	Client: San Joaquin Valley Drainage Authority
Sampled: 31 Jul-04 02:40 PM	Code: 9466	Project: Ag Waiver
Received: 31 Jul-04 02:40 PM	Source: San Joaquin Valley Drainage Authorit	Latitude:
Temp °C: 3.3	Station: 01-MRFSD-013	Longitude:

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
04-9233-9537	48h Proportion Survived	<100	100	N/A	11.01%	Mann-Whitney U

48h Proportion Survived Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Lab Water Co	4	0.95	0.8	1	0.0500000	0.1	10.53%	
100		4	0.75	0.6	0.8	0.05	0.1	13.33%	

48h Proportion Survived Detail						
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Lab Water Co	1	1	1	0.8	
100		0.8	0.8	0.8	0.6	

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 06 Aug-04 12:22 PM
 Link: 02-8800-5680

Acute Ceriodaphnia Survival Test	Pacific EcoRisk
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Test: 07-7056-9957	Test Type: Survival (48h)	Species: Ceriodaphnia dubia
Start Date: 01 Aug-04 06:00 PM	Protocol: EPA-821-R-02-012 (2002)	Source: In-House Culture
End Date: 05 Aug-04 05:00 PM	Dil Water: Spring Water	
Setup Date: 01 Aug-04 06:00 PM	Brine: Not Applicable	

Sample: 09-6632-4610	Material: Ambient Water	Client: San Joaquin Valley Drainage Authority
Sampled: 31 Jul-04 11:58 AM	Code: 9466	Project: Ag Waiver
Received: 31 Jul-04 11:58 AM	Source: San Joaquin Valley Drainage Authorit	Latitude:
Temp °C: 3.2	Station: 01-DSAGR-020	Longitude:

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
09-8478-0250	48h Proportion Survived	100	>100	N/A	11.48%	Mann-Whitney U

48h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	4	0.95	0.8	1	0.0500000	0.1	10.53%
100		4	0.95	0.8	1	0.0500000	0.1	10.53%

48h Proportion Survived Detail					
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Lab Water Co	1	1	1	0.8
100		1	0.8	1	1

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 06 Aug-04 12:23 PM
 Link: 09-3010-9115

Acute Ceriodaphnia Survival Test	Pacific EcoRisk
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Test: 07-7056-9957	Test Type: Survival (48h)	Species: Ceriodaphnia dubia
Start Date: 01 Aug-04 06:00 PM	Protocol: EPA-821-R-02-012 (2002)	Source: In-House Culture
End Date: 05 Aug-04 05:00 PM	Dil Water: Spring Water	
Setup Date: 01 Aug-04 06:00 PM	Brine: Not Applicable	

Sample: 19-0258-0755	Material: Ambient Water	Client: San Joaquin Valley Drainage Authority
Sampled: 31 Jul-04 10:50 AM	Code: 9466	Project: Ag Waiver
Received: 31 Jul-04, 10:50 AM	Source: San Joaquin Valley Drainage Authorit	Latitude:
Temp °C: 3.8	Station: 01-DCAGR-036	Longitude:

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
09-6364-7100	48h Proportion Survived	100	>100	N/A	12.57%	Equal Variance t

48h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	4	0.95	0.8	1	0.0500000	0.1	10.53%
100		4	0.9	0.8	1	0.0577350	0.1154701	12.83%

48h Proportion Survived Detail						
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Lab Water Co	1	1	1	0.8	
100		1	1	0.8	0.8	

CETIS Report

Acute Fish Survival Test	Pacific EcoRisk
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Test: 15-6822-9208	Test Type: Survival (96h)	Species: Pimephales promelas
Start Date: 01 Aug-04 06:30 PM	Protocol: EPA-821-R-02-012 (2002)	Source: Aquatox, AR
End Date: 05 Aug-04 05:30 PM	Dil Water: Spring Water	
Setup Date: 01 Aug-04 06:30 PM	Brine:	

Sample: 10-8934-4406	Material: Ambient Water	Client: San Joaquin Valley Drainage Authority
Sampled: 31 Jul-04 04:05 PM	Code: 9466	Project: Ag Waiver
Received: 31 Jul-04 04:05 PM	Source: San Joaquin Valley Drainage Authority	Latitude:
Temp °C: 5.7	Station: 01-ARDCL-007	Longitude:

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
02-8601-0317	96h Proportion Survived	100	>100	N/A	62.12%	Mann-Whitney U

96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	2	0.9	0.8	1	0.1	0.1414214	15.71%
100		2	0.9	0.8	1	0.1	0.1414214	15.71%

96h Proportion Survived Detail			
Conc-%	Control Type	Rep 1	Rep 2
0	Lab Water Co	0.8	1
100		0.8	1

CETIS Report

Acute Fish Survival Test Pacific EcoRisk

Test: 15-5822-9208	Test Type: Survival (96h)	Species: Pimephales promelas
Start Date: 01 Aug-04 06:30 PM	Protocol: EPA-821-R-02-012 (2002)	Source: Aquatox, AR
End Date: 05 Aug-04 05:30 PM	Dil Water: Spring Water	
Setup Date: 01 Aug-04 06:30 PM	Brine:	

Sample: 10-6449-7999	Material: Ambient Water	Client: San Joaquin Valley Drainage Authority
Sampled: 31 Jul-04 02:40 PM	Code: 9466	Project: Ag Waiver
Received: 31 Jul-04 02:40 PM	Source: San Joaquin Valley Drainage Authority	Latitude:
Temp °C: 3.3	Station: 01-MRFSD-013	Longitude:

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
15-9787-9241	96h Proportion Survived	100	>100	N/A	41.91%	Mann-Whitney U

96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	2	0.9	0.8	1	0.1	0.1414214	15.71%
100		2	1	1	1	0	0	0.00%

96h Proportion Survived Detail			
Conc-%	Control Type	Rep 1	Rep 2
0	Lab Water Co	0.8	1
100		1	1

CETIS Report

Acute Fish Survival Test						Pacific EcoRisk		
Test:	15-6822-9208	Test Type:	Survival (96h)	Species:	Pimephales promelas	Source:	Aquatox, AR	
Start Date:	01 Aug-04 06:30 PM	Protocol:	EPA-821-R-02-012 (2002)	Dil Water:	Spring Water	Brine:		
End Date:	05 Aug-04 05:30 PM							
Setup Date:	01 Aug-04 06:30 PM							
Sample:	09-6632-4610	Material:	Ambient Water	Client:	San Joaquin Valley Drainage Authority	Project:	Ag Waiver	
Sampled:	31 Jul-04 11:58 AM	Code:	9466	Source:	San Joaquin Valley Drainage Authority	Latitude:		
Received:	31 Jul-04 11:58 AM	Station:	01-DSAGR-020	Longitude:				
Temp °C:	3.2							
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method		
13-7618-7166	96h Proportion Survived	100	>100	N/A	48.53%	Mann-Whitney U		
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	2	0.9	0.8	1	0.1	0.1414214	15.71%
100		2	0.95	0.9	1	0.0500000	0.0707107	7.44%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2					
0	Lab Water Co	0.8	1					
100		1	0.9					

CETIS Report

Acute Fish Survival Test **Pacific EcoRisk**

Test: 15-6822-9208	Test Type: Survival (96h)	Species: Pimephales promelas
Start Date: 01 Aug-04 06:30 PM	Protocol: EPA-821-R-02-012 (2002)	Source: Aquatox, AR
End Date: 05 Aug-04 05:30 PM	Dil Water: Spring Water	
Setup Date: 01 Aug-04 06:30 PM	Brine:	

Sample: 19-0258-0755	Material: Ambient Water	Client: San Joaquin Valley Drainage Authority
Sampled: 31 Jul-04 10:50 AM	Code: 9466	Project: Ag Waiver
Received: 31 Jul-04 10:50 AM	Source: San Joaquin Valley Drainage Authority	Latitude:
Temp °C: 3.8	Station: 01-DCAGR-036	Longitude:

Comparison Summary

Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
10-9905-6202	96h Proportion Survived	100	>100	N/A	41.91%	Mann-Whitney U

96h Proportion Survived Summary

Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	2	0.9	0.8	1	0.1	0.1414214	15.71%
100		2	1	1	1	0	0	0.00%

96h Proportion Survived Detail

Conc-%	Control Type	Rep 1	Rep 2
0	Lab Water Co	0.8	1
100		1	1

CETIS Report

Phytoplankton Growth Inhibition Test						Pacific EcoRisk		
Test: 06-8737-2071	Test Type: Cell Growth			Species: Selenastrum capricornutum				
Start Date: 01 Aug-04 03:00 PM	Protocol: EPA/600/4-91/002 (1994)			Source: In-House Culture				
End Date: 05 Aug-04 09:20 AM	Dil Water: Mod-Hard Synthetic Water			Brine:				
Setup Date: 01 Aug-04 03:00 PM								
Sample: 14-8670-8133	Material: Ambient Water			Client: San Joaquin Valley Drainage Authority				
Sampled: 31 Jul-04 11:57 AM	Code: 9466			Project: Ag Waiver				
Received: 31 Jul-04 11:57 AM	Source: San Joaquin Valley Drainage Authority			Latitude:				
Temp °C: 4	Station: 01-DSAGR-019			Longitude:				
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method		
15-9422-3943	Cell Density	100	>100	N/A	32.55%	Equal Variance t		
Cell Density Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	4	591500	516000	768000	59150.232	118300.46	20.00%
100		4	2662000	2478000	2863000	79480.606	158961.21	5.97%
Cell Density Detail								
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4			
0	Lab Water Co	545000	537000	516000	768000			
100		3E+06	3E+06	2E+06	3E+06			

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 30 Sep-04 11:04 AM
 Link: 08-0152-3490

Phytoplankton Growth Inhibition Test Pacific EcoRisk

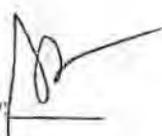
Test: 06-8737-2071	Test Type: Cell Growth	Species: Selenastrum capricornutum
Start Date: 01 Aug-04 03:00 PM	Protocol: EPA/600/4-91/002 (1994)	Source: In-House Culture
End Date: 05 Aug-04 09:20 AM	Dil Water: Mod-Hard Synthetic Water	
Setup Date: 01 Aug-04 03:00 PM	Brine:	

Sample: 09-6632-4610	Material: Ambient Water	Client: San Joaquin Valley Drainage Authority
Sampled: 31 Jul-04 11:58 AM	Code: 9466	Project: Ag Waiver
Received: 31 Jul-04 11:58 AM	Source: San Joaquin Valley Drainage Authority	Latitude:
Temp °C: 3.2	Station: 01-DSAGR-020	Longitude:

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
13-7914-8208	Cell Density	100	>100	N/A	35.35%	Equal Variance t

Cell Density Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	4	591500	516000	768000	59150.232	118300.46	20.00%
100		4	2775500	2553000	2993000	89885.575	179771.15	6.48%

Cell Density Detail						
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Lab Water Co	545000	537000	516000	768000	
100		3E+06	3E+06	3E+06	3E+06	

Approved By: 

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 06 Aug-04 12:21 PM
 Link: 06-3926-3320

Acute Ceriodaphnia Survival Test	Pacific EcoRisk
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Test: 07-7056-9957	Test Type: Survival (48h)	Species: Ceriodaphnia dubia
Start Date: 01 Aug-04 06:00 PM	Protocol: EPA-821-R-02-012 (2002)	Source: In-House Culture
End Date: 05 Aug-04 05:00 PM	Dil Water: Spring Water	
Setup Date: 01 Aug-04 06:00 PM	Brine: Not Applicable	

Sample: 14-8670-8133	Material: Ambient Water	Client: San Joaquin Valley Drainage Authority
Sampled: 31 Jul-04 11:57 AM	Code: 9466	Project: Ag Waiver
Received: 31 Jul-04 11:57 AM	Source: San Joaquin Valley Drainage Authorit	Latitude:
Temp °C: 4	Station: 01-DSAGR-019	Longitude:

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
05-3743-5143	48h Proportion Survived	100	>100	N/A	7.69%	Mann-Whitney U

48h Proportion Survived Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Lab Water Co	4	0.95	0.8	1	0.0500000	0.1	10.53%	
100		4	1	1	1	0	0	0.00%	

48h Proportion Survived Detail						
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Lab Water Co	1	1	1	0.8	
100		1	1	1	1	

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 06 Aug-04 12:22 PM
 Link: 02-8800-5680

Acute Ceriodaphnia Survival Test	Pacific EcoRisk
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Test: 07-7056-9957	Test Type: Survival (48h)	Species: Ceriodaphnia dubia
Start Date: 01 Aug-04 06:00 PM	Protocol: EPA-821-R-02-012 (2002)	Source: In-House Culture
End Date: 05 Aug-04 05:00 PM	Dil Water: Spring Water	
Setup Date: 01 Aug-04 06:00 PM	Brine: Not Applicable	

Sample: 09-8632-4610	Material: Ambient Water	Client: San Joaquin Valley Drainage Authority
Sampled: 31 Jul-04 11:58 AM	Code: 9466	Project: Ag Waiver
Received: 31 Jul-04 11:58 AM	Source: San Joaquin Valley Drainage Authority	Latitude:
Temp °C: 3.2	Station: 01-DSAGR-020	Longitude:

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
09-8478-0250	48h Proportion Survived	100	>100	N/A	11.48%	Mann-Whitney U

48h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	4	0.95	0.8	1	0.0500000	0.1	10.53%
100		4	0.95	0.8	1	0.0500000	0.1	10.53%

48h Proportion Survived Detail						
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Lab Water Co	1	1	1	0.8	
100		1	0.8	1	1	

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 30 Sep-04 10:49 AM
 Link: 02-4262-7735

Acute Fish Survival Test		Pacific EcoRisk						
Test: 15-6822-9208	Test Type: Survival (96h)	Species: Pimephales promelas						
Start Date: 01 Aug-04 06:30 PM	Protocol: EPA-821-R-02-012 (2002)	Source: Aquatox, AR						
End Date: 05 Aug-04 05:30 PM	Dil Water: Spring Water							
Setup Date: 01 Aug-04 06:30 PM	Brine:							
Sample: 14-8670-8133	Material: Ambient Water	Client: San Joaquin Valley Drainage Authority						
Sampled: 31 Jul-04 11:57 AM	Code: 9466	Project: Ag Waiver						
Received: 31 Jul-04 11:57 AM	Source: San Joaquin Valley Drainage Authority	Latitude:						
Temp °C: 4	Station: 01-DSAGR-019	Longitude:						
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method		
07-6860-3280	96h Proportion Survived	100	>100	N/A	41.91%	Mann-Whitney U		
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	2	0.9	0.8	1	0.1	0.1414214	15.71%
100		2	1	1	1	0	0	0.00%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2					
0	Lab Water Co	0.8	1					
100		1	1					

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 30 Sep-04 10:51 AM
 Link: 02-6758-0144

Acute Fish Survival Test							Pacific EcoRisk	
Test:	15-6822-9208	Test Type:	Survival (96h)	Species:	Pimephales promelas			
Start Date:	01 Aug-04 06:30 PM	Protocol:	EPA-821-R-02-012 (2002)	Source:	Aquatox, AR			
End Date:	05 Aug-04 05:30 PM	Dil Water:	Spring Water	Brine:				
Setup Date:	01 Aug-04 06:30 PM							
Sample:	09-6632-4610	Material:	Ambient Water	Client:	San Joaquin Valley Drainage Authority			
Sampled:	31 Jul-04 11:58 AM	Code:	9466	Project:	Ag Waiver			
Received:	31 Jul-04 11:58 AM	Source:	San Joaquin Valley Drainage Authority	Latitude:				
Temp °C:	3.2	Station:	01-DSAGR-020	Longitude:				
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method		
13-7618-7166	96h Proportion Survived	100	>100	N/A	48.53%	Mann-Whitney U		
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	2	0.9	0.8	1	0.1	0.1414214	15.71%
100		2	0.95	0.9	1	0.0500000	0.0707107	7.44%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2					
0	Lab Water Co	0.8	1					
100		1	0.9					

CETIS Report

Phytoplankton Growth Inhibition Test Pacific EcoRisk

Test: 07-5884-1214	Test Type: Cell Growth	Species: Selenastrum capricornutum
Start Date: 01 Sep-04 12:00 PM	Protocol: EPA/600/4-91/002 (1994)	Source: In-House Culture
End Date: 05 Sep-04 01:15 PM	Dil Water: Mod-Hard Synthetic Water	
Setup Date: 01 Sep-04 12:00 PM	Brine:	

Sample: 01-0732-9334	Material: Ambient Water	Client: East San Joaquin River Watershed Co
Sampled: 31 Aug-04 05:05 PM	Code: 9466	Project: Ag Waiver
Received: 31 Aug-04 05:12 PM	Source: East San Joaquin River Watershed Co	Latitude:
Temp °C: 6	Station: 02-ARDCL-001	Longitude:

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
13-8454-2605	Cell Density	100	>100	N/A	16.25%	Equal Variance t

Cell Density Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	4	915000	773000	1000000	49687.356	99374.712	10.86%
100		4	2652250	2549000	2802000	58212.792	116425.58	4.39%

Cell Density Detail						
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Lab Water Co	961000	773000	926000	1E+06	
100		3E+06	3E+06	3E+06	3E+06	

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 01 Oct-04 11:42 AM
 Link: 16-8044-6381

Phytoplankton Growth Inhibition Test	Pacific EcoRisk
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Test: 07-5884-1214	Test Type: Cell Growth	Species: Selenastrum capricornutum
Start Date: 01 Sep-04 12:00 PM	Protocol: EPA/600/4-91/002 (1994)	Source: In-House Culture
End Date: 05 Sep-04 01:15 PM	Dil Water: Mod-Hard Synthetic Water	
Setup Date: 01 Sep-04 12:00 PM	Brine:	

Sample: 08-8899-5722	Material: Ambient Water	Client: East San Joaquin River Watershed Co
Sampled: 31 Aug-04 03:00 PM	Code: 9466	Project: Ag Walver
Received: 31 Aug-04 05:12 PM	Source: East San Joaquin River Watershed Co	Latitude:
Temp °C: 6.5	Station: 02-MRSFD-008	Longitude:

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
06-9231-6656	Cell Density	100	>100	N/A	48.46%	Equal Variance t

Cell Density Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	4	915000	773000	1000000	49687.356	99374.712	10.86%
100		4	1303250	892000	1701000	222735.78	445471.57	34.18%

Cell Density Detail					
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Lab Water Co	961000	773000	926000	1E+06
100		944000	892000	2E+06	2E+06

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 01 Oct-04 11:42 AM
 Link: 03-1216-1564

Phytoplankton Growth Inhibition Test						Pacific EcoRisk		
Test:	07-5884-1214	Test Type:	Cell Growth	Species:	Selenastrum capricornutum			
Start Date:	01 Sep-04 12:00 PM	Protocol:	EPA/600/4-91/002 (1994)	Source:	In-House Culture			
End Date:	05 Sep-04 01:15 PM	Dil Water:	Mod-Hard Synthetic Water					
Setup Date:	01 Sep-04 12:00 PM	Brine:						
Sample:	09-1804-4697	Material:	Ambient Water	Client:	East San Joaquin River Watershed Co			
Sampled:	31 Aug-04 12:00 PM	Code:	9466	Project:	Ag Waiver			
Received:	31 Aug-04 05:12 PM	Source:	East San Joaquin River Watershed Co	Latitude:				
Temp °C:	7	Station:	02-DSAGR-015	Longitude:				
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method		
17-9982-0385	Cell Density	100	>100	N/A	34.07%	Equal Variance t		
Cell Density Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	4	915000	773000	1000000	49687.356	99374.712	10.86%
100		4	2493000	2274000	2930000	152548.9	305097.8	12.24%
Cell Density Detail								
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4			
0	Lab Water Co	961000	773000	926000	1E+06			
100		2E+06	3E+06	2E+06	2E+06			

CETIS Report

Algal Reproduction Test Pacific EcoRisk

Test: 14-8310-7742	Test Type: Cell Growth	Species: Selenastrum capricornutum
Start Date: 01 Sep-02 12:00 PM	Protocol: EPA/600/4-91/002 (1994)	Source: In-House Culture
End Date: 05 Sep-02 10:57 AM	Dil Water: Algal Culture Media	
Setup Date: 01 Sep-02 12:00 PM	Brine:	

Sample: 14-5283-5080	Material: Ambient Water	Client: East San Joaquin River Watershed Co
Sampled: 31 Aug-04 08:28 AM	Code: 9466	Project: Ag Waiver
Received: 31 Aug-04 05:12 PM	Source: East San Joaquin River Watershed Co	Latitude:
Temp °C: 6.8	Station: 02-DCAGR-022	Longitude:

Comparison Summary

Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
03-1996-3926	Cell Density	100	>100	N/A	18.81%	Equal Variance t

Cell Density Summary

Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	4	915000	773000	1000000	49687.356	99374.712	10.86%
100		4	2315500	2191000	2514000	73305.866	146611.73	6.33%

Cell Density Detail

Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Lab Water Co	961000	773000	926000	1E+06
100		2E+06	2E+06	2E+06	3E+06

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 28 Sep-04 4:24 PM
 Link: 08-7734-6825

Acute Ceriodaphnia Survival Test	Pacific EcoRisk
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Test: 08-1638-8170	Test Type: Survival (96h)	Species: Ceriodaphnia dubia
Start Date: 01 Sep-04 03:40 PM	Protocol: EPA-821-R-02-012 (2002)	Source: In-House Culture
End Date: 05 Sep-04 02:45 PM	Dil Water: Spring Water	
Setup Date: 01 Sep-04 03:40 PM	Brine: Not Applicable	

Sample: 01-0732-9334	Material: Ambient Water	Client: East San Joaquin River Watershed Co
Sampled: 31 Aug-04 05:05 PM	Code: 9466	Project: Ag Waiver
Received: 31 Aug-04 05:12 PM	Source: East San Joaquin River Watershed Co	Latitude:
Temp °C: 6	Station: 02-ARDCL-001	Longitude:

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
07-0670-0228	96h Proportion Survived	100	>100	N/A	7.69%	Mann-Whitney U

96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	4	0.95	0.8	1	0.0500000	0.1	10.53%
100		4	1	1	1	0	0	0.00%

96h Proportion Survived Detail					
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Lab Water Co	1	1	1	0.8
100		1	1	1	1

Approved By: 

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 28 Sep-04 4:25 PM
 Link: 00-8910-1911

Acute Ceriodaphnia Survival Test	Pacific EcoRisk
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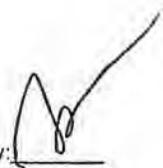
Test: 08-1638-8170	Test Type: Survival (96h)	Species: Ceriodaphnia dubia
Start Date: 01 Sep-04 03:40 PM	Protocol: EPA-821-R-02-012 (2002)	Source: In-House Culture
End Date: 05 Sep-04 02:45 PM	Dil Water: Spring Water	
Setup Date: 01 Sep-04 03:40 PM	Brine: Not Applicable	

Sample: 08-8899-5722	Material: Ambient Water	Client: East San Joaquin River Watershed Co
Sampled: 31 Aug-04 03:00 PM	Code: 9466	Project: Ag Waiver
Received: 31 Aug-04 05:12 PM	Source: East San Joaquin River Watershed Co	Latitude:
Temp °C: 6.5	Station: 02-MRSFD-008	Longitude:

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
11-0869-4643	96h Proportion Survived	<100	100	N/A	7.69%	Mann-Whitney U

96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	4	0.95	0.8	1	0.0500000	0.1	10.53%
100		4	0.4	0.4	0.4	0	0	0.00%

96h Proportion Survived Detail						
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Lab Water Co	1	1	1	0.8	
100		0.4	0.4	0.4	0.4	

Approved By: 

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 28 Sep-04 4:27 PM
 Link: 15-8904-1630

Acute Ceriodaphnia Survival Test	Pacific EcoRisk
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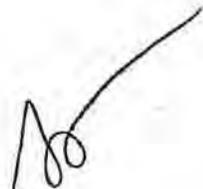
Test: 08-1638-8170	Test Type: Survival (96h)	Species: Ceriodaphnia dubia
Start Date: 01 Sep-04 03:40 PM	Protocol: EPA-821-R-02-012 (2002)	Source: In-House Culture
End Date: 05 Sep-04 02:45 PM	Dil Water: Spring Water	
Setup Date: 01 Sep-04 03:40 PM	Brine: Not Applicable	

Sample: 09-1804-4697	Material: Ambient Water	Client: East San Joaquin River Watershed Co
Sampled: 31 Aug-04 12:00 PM	Code: 9466	Project: Ag Waiver
Received: 31 Aug-04 05:12 PM	Source: East San Joaquin River Watershed Co	Latitude:
Temp °C: 7	Station: 02-DSAGR-015	Longitude:

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
13-2037-7537	96h Proportion Survived	100	>100	N/A	7.69%	Mann-Whitney U

96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	4	0.95	0.8	1	0.0500000	0.1	10.53%
100		4	1	1	1	0	0	0.00%

96h Proportion Survived Detail						
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Lab Water Co	1	1	1	0.8	
100		1	1	1	1	

Approved By: 

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 28 Sep-04 4:30 PM
 Link: 10-9636-4175

Acute Ceriodaphnia Survival Test	Pacific EcoRisk
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Test: 08-1638-8170	Test Type: Survival (96h)	Species: Ceriodaphnia dubia
Start Date: 01 Sep-04 03:40 PM	Protocol: EPA-821-R-02-012 (2002)	Source: In-House Culture
End Date: 05 Sep-04 02:45 PM	Dil Water: Spring Water	
Setup Date: 01 Sep-04 03:40 PM	Brine: Not Applicable	

Sample: 03-7433-7289	Material: Ambient Water	Client: East San Joaquin River Watershed Co
Sampled: 31 Aug-04 08:28 AM	Code: 9466	Project: Ag Waiver
Received: 31 Aug-04 05:12 PM	Source: East San Joaquin River Watershed Co	Latitude:
Temp °C: 6.8	Station: 02-DCAGR-022	Longitude:

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
10-7289-2017	96h Proportion Survived	100	>100	N/A	11.48%	Mann-Whitney U

96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	4	0.95	0.8	1	0.0500000	0.1	10.53%
100		4	0.95	0.8	1	0.0500000	0.1	10.53%

96h Proportion Survived Detail					
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Lab Water Co	1	1	1	0.8
100		1	1	1	0.8

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 01 Oct-04 8:44 AM
 Link: 12-7824-7417

Acute Ceriodaphnia Survival Test	Pacific EcoRisk
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Test: 04-1448-0425	Test Type: Survival (96h)	Species: Ceriodaphnia dubia
Start Date: 08 Sep-04 12:00 PM	Protocol: EPA-821-R-02-012 (2002)	Source: In-House Culture
End Date: 12 Sep-04 01:45 PM	Dil Water: Spring Water	
Setup Date: 08 Sep-04 12:00 PM	Brine: Not Applicable	

Sample: 03-1119-1616	Material: Ambient Water	Client: East San Joaquin River Watershed Co
Sampled: 07 Sep-04 03:45 PM	Code: 9466	Project:
Received: 08 Sep-04 08:00 AM	Source: East San Joaquin River Watershed Co	Latitude:
Temp °C: 8.9	Station: 02-MRSFD-030	Longitude:

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
06-9785-9411	96h Proportion Survived	100	>100	N/A	0.00%	Mann-Whitney U

96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	4	1	1	1	0	0	0.00%
100		4	1	1	1	0	0	0.00%

96h Proportion Survived Detail					
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Lab Water Co	1	1	1	1
100		1	1	1	1

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 01 Oct-04 2:08 PM
 Link: 05-6394-5215

Acute Ceriodaphnia Survival Test	Pacific EcoRisk
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Test: 08-3865-2910	Test Type: Survival (96h)	Species: Ceriodaphnia dubia
Start Date: 08 Sep-04 03:00 PM	Protocol: EPA-821-R-02-012 (2002)	Source: In-House Culture
End Date: 12 Sep-04 03:00 PM	Dil Water: Spring Water	
Setup Date: 08 Sep-04 03:00 PM	Brine:	
Comment: TIE-Baseline		

Sample: 08-8899-5722	Material: Ambient Water	Client: East San Joaquin River Watershed Co
Sampled: 31 Aug-04 03:00 PM	Code: 9466	Project: Ag Waiver
Received: 31 Aug-04 05:12 PM	Source: East San Joaquin River Watershed Co	Latitude:
Temp °C: 6.5	Station: 02-MRSFD-008	Longitude:

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
09-7726-9002	96h Proportion Survived	100	>100	N/A	14.88%	Equal Variance t

96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	4	0.9	0.8	1	0.0577350	0.1154701	12.83%
100		4	0.95	0.8	1	0.0500000	0.1	10.53%

96h Proportion Survived Detail						
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Lab Water Co	0.8	1	0.8	1	
100		0.8	1	1	1	

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 01 Oct-04 2:11 PM
 Link: 16-3579-9877

Acute Ceriodaphnia Survival Test Pacific EcoRisk

Test: 11-2876-4172	Test Type: Survival (96h)	Species: Ceriodaphnia dubia
Start Date: 08 Sep-04 03:00 PM	Protocol: EPA-821-R-02-012 (2002)	Source: In-House Culture
End Date: 12 Sep-04 03:00 PM	Dil Water: Spring Water	
Setup Date: 08 Sep-04 03:00 PM	Brine:	
Comment: TIE-Centrifuged		

Sample: 11-2440-5431	Material: Ambient Water	Client: East San Joaquin River Watershed Co
Sampled: 31 Aug-04 03:00 PM	Code: 9466	Project: Ag Waiver
Received: 31 Aug-04 05:12 PM	Source: East San Joaquin River Watershed Co	Latitude:
Temp °C: 6.5	Station: 02-MRSFD-008	Longitude:
Comment: TIE-Centrifuged		

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
08-3378-6867	96h Proportion Survived	100	>100	N/A	90.71%	Equal Variance t

96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Centrifuged Bl	4	0.55	0.2	1	0.2061553	0.4123106	74.97%
100		4	0.25	0	0.8	0.1892969	0.3785939	151.44%

96h Proportion Survived Detail						
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Centrifuged Bl	1	0.8	0.2	0.2	
100		0.2	0	0	0.8	

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 01 Oct-04 2:14 PM
 Link: 13-2912-4846

Acute Ceriodaphnia Survival Test	Pacific EcoRisk
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Test: 01-7416-4190	Test Type: Survival (96h)	Species: Ceriodaphnia dubia
Start Date: 08 Sep-04 03:00 PM	Protocol: EPA-821-R-02-012 (2002)	Source: In-House Culture
End Date: 12 Sep-04 03:00 PM	Dil Water: Spring Water	
Setup Date: 08 Sep-04 03:00 PM	Brine:	
Comment: TIE-C8 column		

Sample: 13-7568-3586	Material: Ambient Water	Client: East San Joaquin River Watershed Co
Sampled: 31 Aug-04 03:00 PM	Code: 9466	Project: Ag Waiver
Received: 31 Aug-04 05:12 PM	Source: East San Joaquin River Watershed Co	Latitude:
Temp °C: 6.5	Station: 02-MRSFD-008	Longitude:
Comment: TIE-C8 column		

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
13-1071-7156	96h Proportion Survived	100	>100	N/A	0.00%	Mann-Whitney U

96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	C8 Blank	4	1	1	1	0	0	0.00%
100		4	1	1	1	0	0	0.00%

96h Proportion Survived Detail						
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	C8 Blank	1	1	1	1	
100		1	1	1	1	

Approved By: 

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 01 Oct-04 2:15 PM
 Link: 06-3601-4111

Acute Ceriodaphnia Survival Test	Pacific EcoRisk
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Test: 15-5798-8730	Test Type: Survival (96h)	Species: Ceriodaphnia dubia
Start Date: 08 Sep-04 03:00 PM	Protocol: EPA-821-R-02-012 (2002)	Source: In-House Culture
End Date: 12 Sep-04 03:00 PM	Dil Water: Spring Water	
Setup Date: 08 Sep-04 03:00 PM	Brine:	
Comment: TIE-PBO treatment		

Sample: 17-5464-3158	Material: Ambient Water	Client: East San Joaquin River Watershed Co
Sampled: 31 Aug-04 03:00 PM	Code: 9466	Project: Ag Waiver
Received: 31 Aug-04 05:12 PM	Source: East San Joaquin River Watershed Co	Latitude:
Temp °C: 6.5	Station: 02-MRSFD-008	Longitude:
Comment: TIE-PBO treatment		

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
05-4157-3684	96h Proportion Survived	100	>100	N/A	21.24%	Equal Variance t

96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	PBO Blank	4	0.85	0.6	1	0.0957427	0.1914854	22.53%
100		4	1	1	1	0	0	0.00%

96h Proportion Survived Detail					
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	PBO Blank	0.8	1	0.6	1
100		1	1	1	1

96 Hour Acute *Ceriodaphnia dubia* Toxicity Test Data

Client: ESJWQC
 Test ID #: 10372
 Date: 9/8/04

Test Species: *Ceriodaphnia dubia*
 Test Material: 02-MRSFD
 Control/Dilution Water: 80:20:00

Copper Treatment	Temp (°C)	pH		D.O.		Conductivity (µS/cm)	# Live Animals				Sign-Off
		Old	New	Old	New		A	B	C	D	
Control	20.4		7.71		7.62	202.1	5	5	5	5	Time: 15:00 Date: 9-8-04 Initials: R.P.
Cent Blk	20.4		7.96		9.19	208	5	5	5	5	
C8 Blk	20.4		8.04		7.97	213	5	5	5	5	
PBO Blk	20.4		8.15		6.97	211	5	5	5	5	
Baseline	20.4		8.01		8.99	53.5	5	5	5	5	
Cent 100%	20.4		8.01		9.51	51.3	5	5	5	5	
C8 100%	20.4		7.79		9.17	52.2	5	5	5	5	
PBO 100%	20.4		7.69		8.34	53.1	5	5	5	5	
Control	20.6	8.22		8.0			5	5	5	5	Time: 11:30 Date: 9-9-04 Initials: C.F. R.P.
Cent Blk	20.6	8.24		7.8			5	5	5	5	
C8 Blk	20.6	8.21		7.9			5	5	5	5	
PBO Blk	20.6	8.26		7.6			5	5	5	5	
Baseline	20.6	8.29		7.6			5	5	5	5	
Cent 100%	20.6	8.65		7.9			5	5	5	5	
C8 100%	20.6	8.5		7.9			5	5	5	5	
PBO 100%	20.6	8.37		8.1			5	5	5	5	
Control	20.3	7.78	8.12	8.1	7.7	218	5	5	5	5	Time: 15:10 Date: 9-10-04 Initials: P.G.
Cent Blk	20.3	8.18	8.14	8.8	7.6	209	5	5	5	5	
C8 Blk	20.3	8.23	7.98	8.9	7.1	195.0	5	5	5	5	
PBO Blk	20.3	8.22	8.06	8.8	7.4	194.7	5	5	5	5	
Baseline	20.3	8.62	8.13	9.0	7.5	54.3	5	5	5	5	
Cent 100%	20.3	8.48	7.97	8.9	7.6	47.8	5	5	5	5	
C8 100%	20.3	8.31	7.83	8.3	7.6	45.3	5	5	5	5	
PBO 100%	20.3	8.19	7.85	8.9	7.5	44.1	5	5	5	5	
Control	20.1	8.55		8.0			4	5	4	5	Time: 8:15 Date: 9/11/04 Initials: R.P. A.O.
Cent Blk	20.1	8.77		8.5			5	5	5	5	
C8 Blk	20.1	8.72		8.6			5	5	5	5	
PBO Blk	20.1	8.35		8.3			4	5	5	5	
Baseline	20.1	8.60		8.3			5	5	5	5	
Cent 100%	20.1	8.44		8.2			3	5	2	4	
C8 100%	20.1	8.44		8.4			5	5	5	5	
PBO 100%	20.1	8.32		8.7			5	5	5	5	
Control	20.3	8.25		10.0			4	5	4	5	Time: 15:00 Date: 9-12-04 Initials: M.M. Y.K.
Cent Blk	20.3	8.26		10.0			5	4	1	1	
C8 Blk	20.3	8.27		9.8			5	5	5	5	
PBO Blk	20.3	8.27		9.8			4	5	3	5	
Baseline	20.3	8.64		9.6			4	5	5	5	
Cent 100%	20.3	8.45		9.6			1	0	0	4	
C8 100%	20.3	8.41		9.5			5	5	5	5	
PBO 100%	20.3	8.34		9.7			5	5	5	5	

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 28 Sep-04 4:19 PM
 Link: 08-3056-3386

Acute Fish Survival Test	Pacific EcoRisk
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Test: 03-5007-6243	Test Type: Survival (96h)	Species: Pimephales promelas
Start Date: 01 Sep-04 02:00 PM	Protocol: EPA-821-R-02-012 (2002)	Source: Aquatec, AR
End Date: 05 Sep-04 12:00 PM	Dil Water: Mod-Hard Synthetic Water	
Setup Date: 01 Sep-04 02:00 PM	Brine: Not Applicable	

Sample: 01-0732-9334	Material: Ambient Water	Client: East San Joaquin River Watershed Co
Sampled: 31 Aug-04 05:05 PM	Code: 9466	Project: Ag Waiver
Received: 31 Aug-04 05:12 PM	Source: East San Joaquin River Watershed Co	Latitude:
Temp °C: 6	Station: 02-ARDCL-001	Longitude:

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
14-8458-0379	96h Proportion Survived	100	>100	N/A	16.33%	Mann-Whitney U

96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	2	0.95	0.9	1	0.0500000	0.0707107	7.44%
100		2	1	1	1	0	0	0.00%

96h Proportion Survived Detail				
Conc-%	Control Type	Rep 1	Rep 2	
0	Lab Water Co	1	0.9	
100		1	1	

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 28 Sep-04 4:06 PM
 Link: 06-7316-4980

Acute Fish Survival Test	Pacific EcoRisk
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Test: 03-5007-6243	Test Type: Survival (96h)	Species: Pimephales promelas
Start Date: 01 Sep-04 02:00 PM	Protocol: EPA-821-R-02-012 (2002)	Source: Aqatox, AR
End Date: 05 Sep-04 12:00 PM	Dil Water: Mod-Hard Synthetic Water	
Setup Date: 01 Sep-04 02:00 PM	Brine: Not Applicable	

Sample: 08-8899-5722	Material: Ambient Water	Client: East San Joaquin River Watershed Co
Sampled: 31 Aug-04 03:00 PM	Code: 9466	Project: Ag Waiver
Received: 31 Aug-04 05:12 PM	Source: East San Joaquin River Watershed Co	Latitude:
Temp °C: 6.5	Station: 02-MRSFD-008	Longitude:

Comparison Summary

Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
02-6740-9163	96h Proportion Survived	100	>100	N/A	20.33%	Mann-Whitney U

96h Proportion Survived Summary

Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	2	0.95	0.9	1	0.0500000	0.0707107	7.44%
100		2	0.65	0.6	0.7	0.0500000	0.0707107	10.88%

96h Proportion Survived Detail

Conc-%	Control Type	Rep 1	Rep 2
0	Lab Water Co	1	0.9
100		0.7	0.6

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 28 Sep-04 4:17 PM
 Link: 16-8063-5644

Acute Fish Survival Test	Pacific EcoRisk
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Test: 03-5007-6243	Test Type: Survival (96h)	Species: Pimephales promelas
Start Date: 01 Sep-04 02:00 PM	Protocol: EPA-821-R-02-012 (2002)	Source: Aquatox, AR
End Date: 05 Sep-04 12:00 PM	Dil Water: Mod-Hard Synthetic Water	
Setup Date: 01 Sep-04 02:00 PM	Brine: Not Applicable	

Sample: 09-1804-4697	Material: Ambient Water	Client: East San Joaquin River Watershed Co
Sampled: 31 Aug-04 12:00 PM	Code: 9466	Project: Ag Waiver
Received: 31 Aug-04 05:12 PM	Source: East San Joaquin River Watershed Co	Latitude:
Temp °C: 7	Station: 02-DSAGR-015	Longitude:

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
09-5498-3376	96h Proportion Survived	100	>100	N/A	25.34%	Mann-Whitney U

96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	2	0.95	0.9	1	0.0500000	0.0707107	7.44%
100		2	0.95	0.9	1	0.0500000	0.0707107	7.44%

96h Proportion Survived Detail			
Conc-%	Control Type	Rep 1	Rep 2
0	Lab Water Co	1	0.9
100		1	0.9

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 28 Sep-04 4:09 PM
 Link: 05-0324-7596

Acute Fish Survival Test	Pacific EcoRisk
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Test: 03-5007-6243	Test Type: Survival (96h)	Species: Pimephales promelas
Start Date: 01 Sep-04 02:00 PM	Protocol: EPA-821-R-02-012 (2002)	Source: Aquatox, AR
End Date: 05 Sep-04 12:00 PM	Dil Water: Mod-Hard Synthetic Water	
Setup Date: 01 Sep-04 02:00 PM	Brine: Not Applicable	

Sample: 03-7433-7289	Material: Ambient Water	Client: East San Joaquin River Watershed Co
Sampled: 31 Aug-04 08:28 AM	Code: 9466	Project: Ag Waiver
Received: 31 Aug-04 05:12 PM	Source: East San Joaquin River Watershed Co	Latitude:
Temp °C: 6.8	Station: 02-DCAGR-022	Longitude:

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
04-3760-5087	96h Proportion Survived	100	>100	N/A	16.33%	Mann-Whitney U

96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	2	0.95	0.9	1	0.0500000	0.0707107	7.44%
100		2	0.8	0.8	0.8	0	0	0.00%

96h Proportion Survived Detail			
Conc-%	Control Type	Rep 1	Rep 2
0	Lab Water Co	1	0.9
100		0.8	0.8

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 01 Oct-04 10:09 AM
 Link: 17-1857-5599

Hyalella Survival and Growth Test	Pacific EcoRisk
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Test: 05-2110-9396	Test Type: Survival-Growth (10 day)	Species: Hyalella azteca
Start Date: 14 Sep-04 12:00 PM	Protocol: EPA 600/R-99-064 (2000)	Source: Aquatic Biosystems, CO
End Date: 24 Sep-04 12:00 PM	Dil Water: Mod-Hard Synthetic Water	
Setup Date: 14 Sep-04 12:00 PM	Brine:	

Sample: 15-4411-3546	Material: Freshwater Sediment	Client: East San Joaquin River Watershed Co
Sampled: 31 Aug-04 05:06 PM	Code: 9466	Project:
Received: 31 Aug-04 05:12 PM	Source: East San Joaquin River Watershed Co	Latitude:
Temp °C:	Station: 02-ARDCL-002	Longitude:

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
14-8586-5455	Mean Weight	100	>100	N/A	19.68%	Equal Variance t
06-8292-4416	Proportion Survived	100	>100	N/A	3.55%	Equal Variance t

Mean Weight Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Control Sed	8	0.1061668	0.0522224	0.1389999	0.0087143	0.0246477	23.22%
100		8	0.1481527	0.1199997	0.2000000	0.008047	0.0227603	15.36%

Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Control Sed	8	0.95	0.9	1	0.0188982	0.0534522	5.63%
100		8	0.9875	0.9	1	0.0125	0.0353553	3.58%

Mean Weight Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.1130	0.1030	0.139	0.1144	0.0522	0.1010	0.1156	0.1111
100		0.142	0.146	0.1430	0.2000	0.1500	0.1422	0.142	0.12

Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	1	1	1	0.9	0.9	1	0.9	0.9
100		1	1	1	1	1	0.9	1	1

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 01 Oct-04 10:18 AM
 Link: 02-2753-8866

Hyalella Survival and Growth Test Pacific EcoRisk

Test: 05-2110-9396	Test Type: Survival-Growth (10 day)	Species: Hyalella azteca
Start Date: 14 Sep-04 12:00 PM	Protocol: EPA 600/R-99-064 (2000)	Source: Aquatic Biosystems, CO
End Date: 24 Sep-04 12:00 PM	Dil Water: Mod-Hard Synthetic Water	
Setup Date: 14 Sep-04 12:00 PM	Brine:	

Sample: 18-7543-4983	Material: Freshwater Sediment	Client: East San Joaquin River Watershed Co
Sampled: 31 Aug-04 03:01 PM	Code: 9466	Project:
Received: 31 Aug-04 05:12 PM	Source: East San Joaquin River Watershed Co	Latitude:
Temp °C:	Station: 02-MRSFD-009	Longitude:

Comparison Summary

Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
07-5101-1287	Mean Weight	100	>100	N/A	173.77%	Mann-Whitney U
09-1359-9435	Proportion Survived	100	>100	N/A	3.96%	Mann-Whitney U

Mean Weight Summary

Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Control Sed	8	0.1061668	0.0522224	0.1389999	0.0087143	0.0246477	23.22%
100		8	0.1553194	0.1389999	0.2029999	0.0072884	0.0206146	13.27%

Proportion Survived Summary

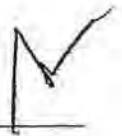
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Control Sed	8	0.95	0.9	1	0.0188982	0.0534522	5.63%
100		8	0.975	0.9	1	0.0163663	0.0462910	4.75%

Mean Weight Detail

Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.1130	0.1030	0.139	0.1144	0.0522	0.1010	0.1156	0.1111
100		0.146	0.1467	0.1430	0.1589	0.203	0.146	0.139	0.16

Proportion Survived Detail

Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	1	1	1	0.9	0.9	1	0.9	0.9
100		1	0.9	1	0.9	1	1	1	1

Approved By: 

Report Date: 19 Nov-04 12:02 PM

Link: 09-4555-0901

CETIS Test Summary

Hyalella Survival and Growth Test							Pacific EcoRisk		
Test No:	05-2110-9396	Test Type:	Survival-Growth (10 day)	Duration:	10 Days 0 Hours				
Start Date:	14 Sep-04 12:00 PM	Protocol:	EPA 600/R-99-064 (2000)	Species:	Hyalella azteca				
Ending Date:	24 Sep-04 12:00 PM	Dil Water:	Mod-Hard Synthetic Water	Source:	Aquatic Biosystems, CO				
Setup Date:	14 Sep-04 12:00 PM	Brine:							
Sample No:	04-4078-7017	Material:	Freshwater Sediment	Client:	East San Joaquin River Watershed Co				
Sample Date:	31 Aug-04 12:01 PM	Code:	9466	Project:					
Receive Date:	31 Aug-04 05:12 PM	Source:	East San Joaquin River Watershed Co						
Sample Age:	13 Days 23 Hours	Station:	02-DSAGR-016						
Comparison Summary									
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method			
16-5986-6842	Mean Weight	<100	100	N/A	16.41%	Equal Variance t			
06-7664-3363	Proportion Survived	<100	100	N/A	8.02%	Equal Variance t			
Mean Weight Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Control Sed	8	0.10617	0.05222	0.13900	0.00871	0.02465	23.22%	
100		8	0.06208	0.04333	0.08000	0.00468	0.01324	21.32%	
Proportion Survived Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Control Sed	8	0.95000	0.90000	1.00000	0.01890	0.05345	5.63%	
100		8	0.33750	0.10000	0.60000	0.05650	0.15980	47.35%	
Mean Weight Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.11300	0.10300	0.13900	0.11444	0.05222	0.10100	0.11556	0.11111
100		0.05000	0.06500	0.04333	0.07333	0.07500	0.05667	0.05333	0.08000
Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	1.00000	1.00000	1.00000	0.90000	0.90000	1.00000	0.90000	0.90000
100		0.50000	0.40000	0.60000	0.30000	0.20000	0.30000	0.30000	0.10000

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 01 Oct-04 10:27 AM
 Link: 00-9122-1946

Hyalella Survival and Growth Test Pacific EcoRisk

Test: 05-2110-9396	Test Type: Survival-Growth (10 day)	Species: Hyalella azteca
Start Date: 14 Sep-04 12:00 PM	Protocol: EPA 600/R-99-064 (2000)	Source: Aquatic Biosystems, CO
End Date: 24 Sep-04 12:00 PM	Dil Water: Mod-Hard Synthetic Water	
Setup Date: 14 Sep-04 12:00 PM	Brine:	

Sample: 04-9990-3178	Material: Freshwater Sediment	Client: East San Joaquin River Watershed Co
Sampled: 31 Aug-04 08:29 AM	Code: 9466	Project:
Received: 31 Aug-04 05:12 PM	Source: East San Joaquin River Watershed Co	Latitude:
Temp °C:	Station: 02-DCAGR-023	Longitude:

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
09-2128-0590	Mean Weight	100	>100	N/A	16.11%	Equal Variance t
05-5474-5718	Proportion Survived	100	>100	N/A	3.55%	Equal Variance t

Mean Weight Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Control Sed	8	0.1061668	0.0522224	0.1389999	0.0087143	0.0246477	23.22%
100		8	0.0894445	0.0680000	0.107	0.0042854	0.0121208	13.55%

Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Control Sed	8	0.95	0.9	1	0.0188982	0.0534522	5.63%
100		8	0.9875	0.9	1	0.0125	0.0353553	3.58%

Mean Weight Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.1130	0.1030	0.139	0.1144	0.0522	0.1010	0.1156	0.1111
100		0.0960	0.0770	0.0930	0.0680	0.0956	0.107	0.087	0.0920

Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	1	1	1	0.9	0.9	1	0.9	0.9
100		1	1	1	1	0.9	1	1	1

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 01 Oct-04 10:27 AM
 Link: 00-9122-1946

Hyalella Survival and Growth Test Pacific EcoRisk

Test: 05-2110-9396	Test Type: Survival-Growth (10 day)	Species: Hyalella azteca
Start Date: 14 Sep-04 12:00 PM	Protocol: EPA 600/R-99-064 (2000)	Source: Aquatic Biosystems, CO
End Date: 24 Sep-04 12:00 PM	Dil Water: Mod-Hard Synthetic Water	
Setup Date: 14 Sep-04 12:00 PM	Brine:	

Sample: 04-9990-3178	Material: Freshwater Sediment	Client: East San Joaquin River Watershed Co
Sampled: 31 Aug-04 08:29 AM	Code: 9466	Project:
Received: 31 Aug-04 05:12 PM	Source: East San Joaquin River Watershed Co	Latitude:
Temp °C:	Station: 02-DCAGR-023	Longitude:

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
09-2128-0590	Mean Weight	100	>100	N/A	16.11%	Equal Variance t
05-5474-5718	Proportion Survived	100	>100	N/A	3.55%	Equal Variance t

Mean Weight Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Control Sed	8	0.1061668	0.0522224	0.1389999	0.0087143	0.0246477	23.22%
100		8	0.0894445	0.0680000	0.107	0.0042854	0.0121208	13.55%

Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Control Sed	8	0.95	0.9	1	0.0188982	0.0534522	5.63%
100		8	0.9875	0.9	1	0.0125	0.0353553	3.58%

Mean Weight Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.1130	0.1030	0.139	0.1144	0.0522	0.1010	0.1156	0.1111
100		0.0960	0.0770	0.0930	0.0680	0.0956	0.107	0.087	0.0920

Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	1	1	1	0.9	0.9	1	0.9	0.9
100		1	1	1	1	0.9	1	1	1

CETIS Report

Test Summary: Page 1 of 1
 Report Date: 01 Oct-04 10:30 AM
 Link: 07-1419-8988

Hyaella Survival and Growth Test Pacific EcoRisk

Test: 05-2110-9396	Test Type: Survival-Growth (10 day)	Species: Hyaella azteca
Start Date: 14 Sep-04 12:00 PM	Protocol: EPA 600/R-99-064 (2000)	Source: Aquatic Biosystems, CO
End Date: 24 Sep-04 12:00 PM	Dil Water: Mod-Hard Synthetic Water	
Setup Date: 14 Sep-04 12:00 PM	Brine:	

Sample: 08-7902-1505	Material: Freshwater Sediment	Client: East San Joaquin River Watershed Co
Sampled: 31 Aug-04 08:30 AM	Code: 9466	Project:
Received: 31 Aug-04 05:12 PM	Source: East San Joaquin River Watershed Co	Latitude:
Temp °C:	Station: 02-DCAGR-024	Longitude:

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
10-2692-5203	Mean Weight	100	>100	N/A	18.89%	Equal Variance t
03-5717-8724	Proportion Survived	100	>100	N/A	4.94%	Equal Variance t

Mean Weight Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Control Sed	8	0.1061668	0.0522224	0.1389999	0.0087143	0.0246477	23.22%
100		8	0.0883263	0.0610001	0.1266666	0.0073285	0.0207281	23.47%

Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Control Sed	8	0.95	0.9	1	0.0188982	0.0534522	5.63%
100		8	0.925	0.8	1	0.0250000	0.0707107	7.64%

Mean Weight Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	0.1130	0.1030	0.139	0.1144	0.0522	0.1010	0.1156	0.1111
100		0.0856	0.065	0.1267	0.0811	0.092	0.0978	0.0975	0.0610

Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	Control Sed	1	1	1	0.9	0.9	1	0.9	0.9
100		0.9	1	0.9	0.9	1	0.9	0.8	1

Report Date: 24 Nov-04 9:50 AM
 Link: 13-6185-0243

CETIS Test Summary

Phytoplankton Growth Inhibition Test						Pacific EcoRisk		
Test No:	09-3409-0943	Test Type:	Cell Growth	Duration:	96 Hours			
Start Date:	30 Sep-04 02:05 PM	Protocol:	EPA-821-R-01-013	Species:	Selenastrum capricornutum			
Ending Date:	04 Oct-04 02:00 PM	Dil Water:	Mod-Hard Synthetic Water	Source:	In-House Culture			
Setup Date:	30 Sep-04 02:05 PM	Brine:						
Sample No:	05-4222-5636	Material:	Ambient Water	Client:	East San Joaquin River Watershed Co			
Sample Date:	29 Sep-04 03:25 PM	Code:	9466	Project:	Ag Waiver			
Receive Date:		Source:	East San Joaquin River Watershed Co					
Sample Age:	23 Hours	Station:	03-ARDCL-001					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method		
16-5052-3634	Cell Density	100	>100	N/A	19.36%	Equal Variance t		
Cell Density Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	4	1.66E+6	1.43E+6	1.94E+6	1.28E+5	2.55E+5	15.40%
100		4	2.67E+6	2.45E+6	2.95E+6	1.05E+5	2.09E+5	7.84%
Cell Density Detail								
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4			
0	Lab Water Co	1.81E+6	1.94E+6	1.43E+6	1.45E+6			
100		2.67E+6	2.95E+6	2.62E+6	2.45E+6			

CETIS Test Summary

Phytoplankton Growth Inhibition Test	Pacific EcoRisk
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Test No: 09-3409-0943	Test Type: Cell Growth	Duration: 96 Hours
Start Date: 30 Sep-04 02:05 PM	Protocol: EPA-821-R-01-013	Species: Selenastrum capricornutum
Ending Date: 04 Oct-04 02:00 PM	Dil Water: Mod-Hard Synthetic Water	Source: In-House Culture
Setup Date: 30 Sep-04 02:05 PM	Brine:	

Sample No: 07-4290-5368	Material: Ambient Water	Client: East San Joaquin River Watershed Co
Sample Date: 29 Sep-04 01:42 PM	Code: 9466	Project: Ag Waiver
Receive Date:	Source: East San Joaquin River Watershed Co	
Sample Age: 24 Hours	Station: 03-MRSFD-007	

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
10-1248-7439	Cell Density	100	>100	N/A	38.47%	Equal Variance t

Cell Density Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	4	1.66E+6	1.43E+6	1.94E+6	1.28E+5	2.55E+5	15.40%
100		4	1.37E+6	9.05E+5	2.25E+6	3.02E+5	6.05E+5	44.27%

Cell Density Detail					
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Lab Water Co	1.81E+6	1.94E+6	1.43E+6	1.45E+6
100		2.25E+6	9.05E+5	1.20E+6	1.10E+6

Report Date: 24 Nov-04 10:15 AM
 Link: 16-0526-6612

CETIS Test Summary

Phytoplankton Growth Inhibition Test						Pacific EcoRisk		
Test No:	09-3409-0943	Test Type:	Cell Growth	Duration:	96 Hours			
Start Date:	30 Sep-04 02:05 PM	Protocol:	EPA-821-R-01-013	Species:	Selenastrum capricornutum			
Ending Date:	04 Oct-04 02:00 PM	Dil Water:	Mod-Hard Synthetic Water	Source:	In-House Culture			
Setup Date:	30 Sep-04 02:05 PM	Brine:						
Sample No:	04-6929-1513	Material:	Ambient Water	Client:	East San Joaquin River Watershed Co			
Sample Date:	23 Sep-04 10:00 AM	Code:	9466	Project:	Ag Waiver			
Receive Date:		Source:	East San Joaquin River Watershed Co					
Sample Age:	7 Days 4 Hours (4.5)	Station:	03-DSAGR-013					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method		
01-7280-9682	Cell Density	<100	100	N/A	15.30%	Equal Variance t		
Cell Density Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	4	1.68E+6	1.43E+6	1.94E+6	1.28E+5	2.55E+5	15.40%
100		4	1.22E+6	1.15E+6	1.28E+6	2.74E+4	5.47E+4	4.47%
Cell Density Detail								
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4			
0	Lab Water Co	1.81E+6	1.94E+6	1.43E+6	1.45E+6			
100		1.22E+6	1.25E+6	1.15E+6	1.28E+6			

Report Date: 24 Nov-04 10:19 AM

Link: 12-0435-4793

CETIS Test Summary

Phytoplankton Growth Inhibition Test			Pacific EcoRisk					
Test No:	09-3409-0943	Test Type:	Cell Growth	Duration:	96 Hours			
Start Date:	30 Sep-04 02:05 PM	Protocol:	EPA-821-R-01-013	Species:	Selenastrum capricornutum			
Ending Date:	04 Oct-04 02:00 PM	Dil Water:	Mod-Hard Synthetic Water	Source:	In-House Culture			
Setup Date:	30 Sep-04 02:05 PM	Brine:						
Sample No:	19-8695-3443	Material:	Ambient Water	Client:	East San Joaquin River Watershed Co			
Sample Date:	23 Sep-04 08:55 AM	Code:	9466	Project:	Ag Waiver			
Receive Date:		Source:	East San Joaquin River Watershed Co					
Sample Age:	7 Days 5 Hours	Station:	03-DCAGR-019					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method		
13-7406-8920	Cell Density	100	>100	N/A	15.61%	Equal Variance t		
Cell Density Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	4	1.66E+6	1.43E+6	1.94E+6	1.28E+5	2.55E+5	15.40%
100		4	1.63E+6	1.54E+6	1.71E+6	3.79E+4	7.58E+4	4.65%
Cell Density Detail								
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4			
0	Lab Water Co	1.81E+6	1.84E+6	1.43E+6	1.45E+6			
100		1.71E+6	1.67E+6	1.60E+6	1.54E+6			

CETIS Test Summary

Acute Ceriodaphnia Survival Test Pacific EcoRisk

Test No: 04-8883-2237	Test Type: Survival (48h)	Duration: 95 Hours
Start Date: 30 Sep-04 03:45 PM	Protocol: EPA/821/R-02-013 (2002)	Species: Ceriodaphnia dubia
Ending Date: 04 Oct-04 03:00 PM	Dil Water: Spring Water	Source: In-House Culture
Setup Date: 30 Sep-04 03:45 PM	Brine:	

Sample No: 05-4222-5636	Material: Ambient Water	Client: East San Joaquin River Watershed Co
Sample Date: 29 Sep-04 03:25 PM	Code: 9466	Project: Ag Waiver
Receive Date:	Source: East San Joaquin River Watershed Co	
Sample Age: 24 Hours	Station: 03-ARDCL-001	

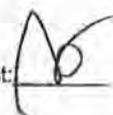
Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
18-8920-3284	48h Proportion Survived	100	>100	N/A	5.00%	Mann-Whitney U

48h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%

48h Proportion Survived Detail					
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Lab Water Co	1.00000	1.00000	1.00000	1.00000
100		1.00000	1.00000	1.00000	1.00000

CETIS Test Summary

Acute Ceriodaphnia Survival Test						Pacific EcoRisk		
Test No:	04-8883-2237	Test Type:	Survival (48h)	Duration:	95 Hours			
Start Date:	30 Sep-04 03:45 PM	Protocol:	EPA/821/R-02-013 (2002)	Species:	Ceriodaphnia dubia			
Ending Date:	04 Oct-04 03:00 PM	Dil Water:	Spring Water	Source:	In-House Culture			
Setup Date:	30 Sep-04 03:45 PM	Brine:						
Sample No:	07-4290-5368	Material:	Ambient Water	Client:	East San Joaquin River Watershed Co			
Sample Date:	29 Sep-04	Code:	9466	Project:	Ag Waiver			
Receive Date:		Source:	East San Joaquin River Watershed Co					
Sample Age:	40 Hours	Station:	03-MRSFD-007					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method		
06-8563-7462	48h Proportion Survived	100	>100	N/A	5.00%	Mann-Whitney U		
48h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
48h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4			
0	Lab Water Co	1.00000	1.00000	1.00000	1.00000			
100		1.00000	1.00000	1.00000	1.00000			

Analyst:  Approval: 

Report Date: 24 Nov-04 10:24 AM
 Link: 02-0199-8171

CETIS Test Summary

Acute Ceriodaphnia Survival Test			Pacific EcoRisk					
Test No:	04-8883-2237	Test Type:	Survival (48h)	Duration:	95 Hours			
Start Date:	30 Sep-04 03:45 PM	Protocol:	EPA/821/R-02-013 (2002)	Species:	Ceriodaphnia dubia			
Ending Date:	04 Oct-04 03:00 PM	Dil Water:	Spring Water	Source:	In-House Culture			
Setup Date:	30 Sep-04 03:45 PM	Brine:						
Sample No:	04-6929-1513	Material:	Ambient Water	Client:	East San Joaquin River Watershed Co			
Sample Date:	23 Sep-04 10:00 AM	Code:	9466	Project:	Ag Waiver			
Receive Date:		Source:	East San Joaquin River Watershed Co					
Sample Age:	7 Days 5 Hours (4.5)	Station:	03-DSAGR-013					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method		
12-6645-6945	48h Proportion Survived	100	>100	N/A	5.00%	Mann-Whitney U		
48h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
48h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4			
0	Lab Water Co	1.00000	1.00000	1.00000	1.00000			
100		1.00000	1.00000	1.00000	1.00000			

CETIS Test Summary

Acute Ceriodaphnia Survival Test						Pacific EcoRisk		
Test No:	04-8883-2237	Test Type:	Survival (48h)	Duration:	95 Hours			
Start Date:	30 Sep-04 03:45 PM	Protocol:	EPA/821/R-02-013 (2002)	Species:	Ceriodaphnia dubia			
Ending Date:	04 Oct-04 03:00 PM	Dil Water:	Spring Water	Source:	In-House Culture			
Setup Date:	30 Sep-04 03:45 PM	Brine:						
Sample No:	19-8695-3443	Material:	Ambient Water	Client:	East San Joaquin River Watershed Co			
Sample Date:	23 Sep-04 08:55 AM	Code:	9466	Project:	Ag Waiver			
Receive Date:		Source:	East San Joaquin River Watershed Co					
Sample Age:	7 Days 6 Hours	Station:	03-DCAGR-019					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method		
00-8563-5912	48h Proportion Survived	100	>100	N/A	11.20%	Mann-Whitney U		
48h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		4	0.95000	0.80000	1.00000	0.05000	0.10000	10.53%
48h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4			
0	Lab Water Co	1.00000	1.00000	1.00000	1.00000			
100		1.00000	1.00000	1.00000	0.80000			

Report Date: 24 Nov-04 10:26 AM

Link: 06-4936-3014

CETIS Test Summary

Acute Fish Survival Test			Pacific EcoRisk					
Test No:	12-9058-0276	Test Type:	Survival (96h)	Duration:	94 Hours			
Start Date:	30 Sep-04 02:15 PM	Protocol:	EPA/821/R-02-013 (2002)	Species:	Pimephales promelas			
Ending Date:	04 Oct-04 12:35 PM	Dil Water:	Mod-Hard Synthetic Water	Source:	Aquatic Biosystems, CO			
Setup Date:	30 Sep-04 02:15 PM	Brine:						
Sample No:	05-4222-5636	Material:	Ambient Water	Client:	East San Joaquin River Watershed Co			
Sample Date:	29 Sep-04 03:25 PM	Code:	9466	Project:	Ag Waiver			
Receive Date:		Source:	East San Joaquin River Watershed Co					
Sample Age:	23 Hours	Station:	03-ARDCL-001					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method		
03-7502-2655	96h Proportion Survived	100	>100	N/A	14.93%	Mann-Whitney U		
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		2	0.95000	0.90000	1.00000	0.05000	0.07071	7.44%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2					
0	Lab Water Co	1.00000	1.00000					
100		0.90000	1.00000					

CETIS Test Summary

Acute Fish Survival Test			Pacific EcoRisk					
Test No:	12-9058-0276	Test Type:	Survival (96h)	Duration:	94 Hours			
Start Date:	30 Sep-04 02:15 PM	Protocol:	EPA/821/R-02-013 (2002)	Species:	Pimephales promelas			
Ending Date:	04 Oct-04 12:35 PM	DII Water:	Mod-Hard Synthetic Water	Source:	Aquatic Biosystems, CO			
Setup Date:	30 Sep-04 02:15 PM	Brine:						
Sample No:	07-4290-5368	Material:	Ambient Water	Client:	East San Joaquin River Watershed Co			
Sample Date:	29 Sep-04	Code:	9466	Project:	Ag Waiver			
Receive Date:		Source:	East San Joaquin River Watershed Co					
Sample Age:	38 Hours	Station:	03-MRSFD-007					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method		
16-7930-4859	96h Proportion Survived	100	>100	N/A	14.93%	Mann-Whitney U		
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		2	0.95000	0.90000	1.00000	0.05000	0.07071	7.44%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2					
0	Lab Water Co	1.00000	1.00000					
100		0.90000	1.00000					

Report Date: 24 Nov-04 10:27 AM
 Link: 10-0033-5908

CETIS Test Summary

Acute Fish Survival Test		Pacific EcoRisk						
Test No:	12-9058-0276	Test Type:	Survival (96h)	Duration:	94 Hours			
Start Date:	30 Sep-04 02:15 PM	Protocol:	EPA/821/R-02-013 (2002)	Species:	Pimephales promelas			
Ending Date:	04 Oct-04 12:35 PM	Dil Water:	Mod-Hard Synthetic Water	Source:	Aquatic Biosystems, CO			
Setup Date:	30 Sep-04 02:15 PM	Brine:						
Sample No:	04-6929-1513	Material:	Ambient Water	Client:	East San Joaquin River Watershed Co			
Sample Date:	23 Sep-04 10:00 AM	Code:	9466	Project:	Ag Waiver			
Receive Date:		Source:	East San Joaquin River Watershed Co					
Sample Age:	7 Days 4 Hours (4.5)	Station:	03-DSAGR-013					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method		
13-5339-1143	96h Proportion Survived	100	>100	N/A	2.50%	Mann-Whitney U		
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2					
0	Lab Water Co	1.00000	1.00000					
100		1.00000	1.00000					

Report Date: 24 Nov-04 10:27 AM
 Link: 04-8275-9930

CETIS Test Summary

Acute Fish Survival Test				Pacific EcoRisk				
Test No:	12-9058-0276	Test Type:	Survival (96h)	Duration:	94 Hours			
Start Date:	30 Sep-04 02:15 PM	Protocol:	EPA/821/R-02-013 (2002)	Species:	Pimephales promelas			
Ending Date:	04 Oct-04 12:35 PM	Dil Water:	Mod-Hard Synthetic Water	Source:	Aquatic Biosystems, CO			
Setup Date:	30 Sep-04 02:15 PM	Brine:						
Sample No:	19-8695-3443	Material:	Ambient Water	Client:	East San Joaquin River Watershed Co			
Sample Date:	23 Sep-04 08:55 AM	Code:	9466	Project:	Ag Waiver			
Receive Date:		Source:	East San Joaquin River Watershed Co					
Sample Age:	7 Days 5 Hours	Station:	03-DCAGR-019					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method		
02-9349-6603	96h Proportion Survived	100	>100	N/A	14.93%	Mann-Whitney U		
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water Co	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		2	0.95000	0.90000	1.00000	0.05000	0.07071	7.44%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2					
0	Lab Water Co	1.00000	1.00000					
100		1.00000	0.90000					

Table 11a. Physical parameters for Event #1 (July 31, 2004). PQL = Practical Quantitation Limit, DIL = Dilution, DLR = PQR x Dilution

SampleNumber	SiteCode	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	DLR	PQL	DIL	Flag
477512	01-ARDCL-010	07/31/2004	Liquid	E	76913	08/02/2004	08/02/2004	Color (A.P.H.A)	150	units	SM 2120 B	5	1	5	
477517	01-DCAGR-039	07/31/2004	Liquid	E	76913	08/02/2004	08/02/2004	Color (A.P.H.A)	150	units	SM 2120 B	10	1	10	
477514	01-DSAGR-027	07/31/2004	Liquid	E	76913	08/02/2004	08/02/2004	Color (A.P.H.A)	ND	units	SM 2120 B	1	1	1	
477515	01-DSAGR-028	07/31/2004	Liquid	E	76913	08/02/2004	08/02/2004	Color (A.P.H.A)	200	units	SM 2120 B	10	1	10	
477516	01-DSAGR-29	07/31/2004	Liquid	E	76913	08/02/2004	08/02/2004	Color (A.P.H.A)	200	units	SM 2120 B	10	1	10	
477513	01-MRSFD-016	07/31/2004	Liquid	E	76913	08/02/2004	08/02/2004	Color (A.P.H.A)	25	units	SM 2120 B	1	1	1	
477512	01-ARDCL-010	07/31/2004	Liquid	E	76931	08/02/2004	08/02/2004	pH	8.4	Std.Unit	SM 4500-H+ B	N/A	-	1	
477517	01-DCAGR-039	07/31/2004	Liquid	E	76931	08/02/2004	08/02/2004	pH	8.1	Std.Unit	SM 4500-H+ B	N/A	-	1	
477514	01-DSAGR-027	07/31/2004	Liquid	E	76931	08/02/2004	08/02/2004	pH	6.4	Std.Unit	SM 4500-H+ B	N/A	-	1	
477515	01-DSAGR-028	07/31/2004	Liquid	E	76931	08/02/2004	08/02/2004	pH	8.0	Std.Unit	SM 4500-H+ B	N/A	-	1	
477516	01-DSAGR-29	07/31/2004	Liquid	E	76931	08/02/2004	08/02/2004	pH	8.0	Std.Unit	SM 4500-H+ B	N/A	-	1	
477513	01-MRSFD-016	07/31/2004	Liquid	E	76931	08/02/2004	08/02/2004	pH	7.6	Std.Unit	SM 4500-H+ B	N/A	-	1	
477512	01-ARDCL-010	07/31/2004	Liquid	E	77121	08/04/2004	08/06/2004	Total Dissolved Solids (TDS)	1400	mg/L	SM 2540 C	5	5	1	
477517	01-DCAGR-039	07/31/2004	Liquid	E	77121	08/04/2004	08/06/2004	Total Dissolved Solids (TDS)	230	mg/L	SM 2540 C	5	5	1	
477514	01-DSAGR-027	07/31/2004	Liquid	E	77121	08/04/2004	08/06/2004	Total Dissolved Solids (TDS)	ND	mg/L	SM 2540 C	5	5	1	
477515	01-DSAGR-028	07/31/2004	Liquid	E	77121	08/04/2004	08/06/2004	Total Dissolved Solids (TDS)	230	mg/L	SM 2540 C	5	5	1	
477516	01-DSAGR-29	07/31/2004	Liquid	E	77121	08/04/2004	08/06/2004	Total Dissolved Solids (TDS)	230	mg/L	SM 2540 C	5	5	1	
477513	01-MRSFD-016	07/31/2004	Liquid	E	77121	08/04/2004	08/06/2004	Total Dissolved Solids (TDS)	39	mg/L	SM 2540 C	5	5	1	
477512	01-ARDCL-010	07/31/2004	Liquid	E	76913	08/02/2004	08/02/2004	Turbidity	41	NTU	SM 2130 B	1.0	0.1	10	
477517	01-DCAGR-039	07/31/2004	Liquid	E	76913	08/02/2004	08/02/2004	Turbidity	74	NTU	SM 2130 B	1.0	0.1	10	
477514	01-DSAGR-027	07/31/2004	Liquid	E	76913	08/02/2004	08/02/2004	Turbidity	0.10	NTU	SM 2130 B	0.1	0.1	1	
477515	01-DSAGR-028	07/31/2004	Liquid	E	76913	08/02/2004	08/02/2004	Turbidity	82	NTU	SM 2130 B	1.0	0.1	10	
477516	01-DSAGR-29	07/31/2004	Liquid	E	76913	08/02/2004	08/02/2004	Turbidity	93	NTU	SM 2130 B	1.0	0.1	10	
477513	01-MRSFD-016	07/31/2004	Liquid	E	76913	08/02/2004	08/02/2004	Turbidity	1.6	NTU	SM 2130 B	0.1	0.1	1	

Table 11b. TOC for Event #1 (July 31, 2004). See Table 10 for Abbreviations.

SampleNumber	SiteCode	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	DLR	PQL	DIL	Flag
477518	01-ARDCL-009	07/31/2004	Liquid	E	77363	08/09/2004	08/09/2004	Total Organic Carbon (TOC)	12	mg/L	SM 5310-C	0.4	0.2	2	
477523	01-DCAGR-038	07/31/2004	Liquid	E	77338	08/06/2004	08/06/2004	Total Organic Carbon (TOC)	4.5	mg/L	SM 5310-C	1.0	0.2	5	
477520	01-DSAGR-024	07/31/2004	Liquid	E	77363	08/09/2004	08/09/2004	Total Organic Carbon (TOC)	ND	mg/L	SM 5310-C	0.2	0.2	1	
477521	01-DSAGR-025	07/31/2004	Liquid	E	77338	08/06/2004	08/06/2004	Total Organic Carbon (TOC)	8.7	mg/L	SM 5310-C	1.0	0.2	5	
477522	01-DSAGR-026	07/31/2004	Liquid	E	77338	08/06/2004	08/06/2004	Total Organic Carbon (TOC)	9.6	mg/L	SM 5310-C	1.0	0.2	5	
477519	01-MRSFD-015	07/31/2004	Liquid	E	77338	08/06/2004	08/06/2004	Total Organic Carbon (TOC)	2.6	mg/L	SM 5310-C	0.2	0.2	1	

Table 12. E coli for Event #1 (July 31, 2004). See Table 10 for Abbreviations.

SampleNumber	SiteCode	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	DLR	PQL	DIL	Flag
478895	01-ARDCL-008	07/31/2004	Liquid	E	77002	07/31/2004	07/31/2004	E. coli (3x5 MTF)	300	MPN/100mLs	SM 9221-B/F	2	2	1	
478897	01-DSAGR-021 FB	07/31/2004	Liquid	FB	77002	07/31/2004	07/31/2004	E. coli (3x5 MTF)	<2	MPN/100mLs	SM 9221-B/F	2	2	1	
478898	01-DSAGR-022 FD	07/31/2004	Liquid	FD	77002	07/31/2004	07/31/2004	E. coli (3x5 MTF)	350	MPN/100mLs	SM 9221-B/F	2	2	1	
478899	01-DSAGR-023	07/31/2004	Liquid	E	77002	07/31/2004	07/31/2004	E. coli (3x5 MTF)	350	MPN/100mLs	SM 9221-B/F	2	2	1	
478900	01-DCAGR-037	07/31/2004	Liquid	E	77002	07/31/2004	07/31/2004	E. coli (3x5 MTF)	1600	MPN/100mLs	SM 9221-B/F	2	2	1	
478896	01-MRSFD-014	07/31/2004	Liquid	E	77002	07/31/2004	07/31/2004	E. coli (3x5 MTF)	80	MPN/100mLs	SM 9221-B/F	2	2	1	

Table13. Physical parameters for Event #2 (August 31, 2004). See Table 10 for Abbreviations.

SampleNumber	SiteCode	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	DLR	PQL	DIL	Flag
491277	02-ARDCL-005	09/01/2008	Liquid	E	78822	09/02/2008	09/02/2008	Color (A.P.H.A)	120	units	SM 2120 B	10	1	10	
491280	02-DCAGR-027	09/01/2008	Liquid	E	78822	09/02/2008	09/02/2008	Color (A.P.H.A)	50	units	SM 2120 B	10	1	10	
491279	02-DSAGR-019	09/01/2008	Liquid	E	78822	09/02/2008	09/02/2008	Color (A.P.H.A)	70	units	SM 2120 B	2	1	2	
491278	02-MRSFD-012	09/01/2008	Liquid	E	78822	09/02/2008	09/02/2008	Color (A.P.H.A)	20	units	SM 2120 B	1	1	1	
491277	02-ARDCL-005	09/01/2008	Liquid	E	78821	09/02/2008	09/02/2008	pH	8.1	Std.Unit	SM 4500-H+ B	N/A	-	1	
491280	02-DCAGR-027	09/01/2008	Liquid	E	78821	09/02/2008	09/02/2008	pH	8.1	Std.Unit	SM 4500-H+ B	N/A	-	1	
491279	02-DSAGR-019	09/01/2008	Liquid	E	78821	09/02/2008	09/02/2008	pH	8.1	Std.Unit	SM 4500-H+ B	N/A	-	1	
491278	02-MRSFD-012	09/01/2008	Liquid	E	78821	09/02/2008	09/02/2008	pH	7.7	Std.Unit	SM 4500-H+ B	N/A	-	1	
491277	02-ARDCL-005	09/01/2008	Liquid	E	78996	09/04/2008	09/09/2008	Total Dissolved Solids (TDS)	710	mg/L	SM 2540 C	5	5	1	
491280	02-DCAGR-027	09/01/2008	Liquid	E	78996	09/04/2008	09/09/2008	Total Dissolved Solids (TDS)	210	mg/L	SM 2540 C	5	5	1	
491279	02-DSAGR-019	09/01/2008	Liquid	E	78996	09/04/2008	09/09/2008	Total Dissolved Solids (TDS)	280	mg/L	SM 2540 C	5	5	1	
491278	02-MRSFD-012	09/01/2008	Liquid	E	78996	09/04/2008	09/09/2008	Total Dissolved Solids (TDS)	37	mg/L	SM 2540 C	5	5	1	
491277	02-ARDCL-005	09/01/2008	Liquid	E	78822	09/02/2008	09/02/2008	Turbidity	43	NTU	SM 2130 B	1.0	0.1	10	
491280	02-DCAGR-027	09/01/2008	Liquid	E	78822	09/02/2008	09/02/2008	Turbidity	58	NTU	SM 2130 B	1.0	0.1	10	
491279	02-DSAGR-019	09/01/2008	Liquid	E	78822	09/02/2008	09/02/2008	Turbidity	20	NTU	SM 2130 B	0.2	0.1	2	
491278	02-MRSFD-012	09/01/2008	Liquid	E	78822	09/02/2008	09/02/2008	Turbidity	1.4	NTU	SM 2130 B	0.1	0.1	1	

Table 13. TOC for Event #2 (August 31, 2004). See Table 10 for Abbreviations.

SampleNumber	SiteCode	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	DLR	PQL	DIL	Flag
491272	02-ARDCL-004	09/01/2008	Liquid	E	78862	09/03/2008	09/03/2008	Total Organic Carbon (TOC)	12	mg/L	SM 5310-C	0.4	0.2	2	
491275	02-DCAGR-026	09/01/2008	Liquid	E	78862	09/03/2008	09/03/2008	Total Organic Carbon (TOC)	4.3	mg/L	SM 5310-C	0.4	0.2	2	
491274	02-DSAGR-018	09/01/2008	Liquid	E	78862	09/03/2008	09/03/2008	Total Organic Carbon (TOC)	9.5	mg/L	SM 5310-C	0.4	0.2	2	
491273	02-MRSFD-011	09/01/2008	Liquid	E	78862	09/03/2008	09/03/2008	Total Organic Carbon (TOC)	2.6	mg/L	SM 5310-C	0.2	0.2	1	

Table 14. E. coli for Event #2 (August 31, 2004). See Table 10 for Abbreviations.

SampleNumber	SiteCode	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	DLR	PQL	DIL	Flag
490990	02-ARDCL-003	09/01/2008	Liquid	E	79038	09/01/2008	09/01/2008	E. coli (3x5 MTF)	300	MPN/100mLs	SM 9221-B/F	2	2	1	
490993	02-DCAGR-025	09/01/2008	Liquid	E	79038	09/01/2008	09/01/2008	E. coli (3x5 MTF)	1600	MPN/100mLs	SM 9221-B/F	2	2	1	
490992	02-DSAGR-017	09/01/2008	Liquid	E	79038	09/01/2008	09/01/2008	E. coli (3x5 MTF)	30	MPN/100mLs	SM 9221-B/F	2	2	1	
490991	02-MRSFD-010	09/01/2008	Liquid	E	79038	09/01/2008	09/01/2008	E. coli (3x5 MTF)	110	MPN/100mLs	SM 9221-B/F	2	2	1	

Table 15. Physical parameters for Event #3 (September 29, 2004). See Table 10 for Abbreviations.

SampleNumber	SiteCode	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	DLR	PQL	DIL	Flag
502481	03-ARDCL-004	09/30/2008	Liquid	E	80419	10/01/2008	10/01/2008	Color (A.P.H.A)	75	units	SM 2120 B	5	1	5	
502484	03-DCAGR-022	09/30/2008	Liquid	E	80419	10/01/2008	10/01/2008	Color (A.P.H.A)	100	units	SM 2120 B	10	1	10	
502483	03-DSAGR-016	09/30/2008	Liquid	E	80419	10/01/2008	10/01/2008	Color (A.P.H.A)	150	units	SM 2120 B	10	1	10	
502482	03-MRSFD-010	09/30/2008	Liquid	E	80419	10/01/2008	10/01/2008	Color (A.P.H.A)	10	units	SM 2120 B	1	1	1	
502481	03-ARDCL-004	09/30/2008	Liquid	E	80400	10/01/2008	10/01/2008	pH	9.0	Std.Unit	SM 4500-H+ B	N/A	-	1	
502484	03-DCAGR-022	09/30/2008	Liquid	E	80400	10/01/2008	10/01/2008	pH	8.3	Std.Unit	SM 4500-H+ B	N/A	-	1	
502483	03-DSAGR-016	09/30/2008	Liquid	E	80400	10/01/2008	10/01/2008	pH	7.9	Std.Unit	SM 4500-H+ B	N/A	-	1	
502482	03-MRSFD-010	09/30/2008	Liquid	E	80400	10/01/2008	10/01/2008	pH	7.6	Std.Unit	SM 4500-H+ B	N/A	-	1	
502481	03-ARDCL-004	09/30/2008	Liquid	E	80604	10/05/2008	10/07/2008	Total Dissolved Solids (TDS)	730	mg/L	SM 2540 C	5	5	1	
502484	03-DCAGR-022	09/30/2008	Liquid	E	80604	10/05/2008	10/07/2008	Total Dissolved Solids (TDS)	370	mg/L	SM 2540 C	5	5	1	
502483	03-DSAGR-016	09/30/2008	Liquid	E	80604	10/05/2008	10/07/2008	Total Dissolved Solids (TDS)	540	mg/L	SM 2540 C	5	5	1	
502482	03-MRSFD-010	09/30/2008	Liquid	E	80604	10/05/2008	10/07/2008	Total Dissolved Solids (TDS)	46	mg/L	SM 2540 C	5	5	1	
502481	03-ARDCL-004	09/30/2008	Liquid	E	80419	10/01/2008	10/01/2008	Turbidity	20	NTU	SM 2130 B	0.5	0.1	5	
502484	03-DCAGR-022	09/30/2008	Liquid	E	80419	10/01/2008	10/01/2008	Turbidity	64	NTU	SM 2130 B	1.0	0.1	10	
502483	03-DSAGR-016	09/30/2008	Liquid	E	80419	10/01/2008	10/01/2008	Turbidity	78	NTU	SM 2130 B	1.0	0.1	10	
502482	03-MRSFD-010	09/30/2008	Liquid	E	80419	10/01/2008	10/01/2008	Turbidity	1.7	NTU	SM 2130 B	0.1	0.1	1	

Table 16. TOC for Event #3 (September 29, 2004). See Table 10 for Abbreviations.

SampleNumber	SiteCode	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	DLR	PQL	DIL	Flag
502485	03-ARDCL-003	09/30/2008	Liquid	E	81017	10/09/2008	10/09/2008	Total Organic Carbon (TOC)	9.9	mg/L	SM 5310-C	0.4	0.2	2	
502488	03-DCAGR-021	09/30/2008	Liquid	E	80827	10/07/2008	10/07/2008	Total Organic Carbon (TOC)	4.0	mg/L	SM 5310-C	0.2	0.2	1	
502487	03-DSAGR-015	09/30/2008	Liquid	E	80827	10/07/2008	10/07/2008	Total Organic Carbon (TOC)	5.7	mg/L	SM 5310-C	0.2	0.2	1	
502486	03-MRSFD-009	09/30/2008	Liquid	E	80827	10/07/2008	10/07/2008	Total Organic Carbon (TOC)	2.5	mg/L	SM 5310-C	0.2	0.2	1	

Table 17. *E. coli* for Event #3 (September 29, 2004). See Table 10 for Abbreviations.

SampleNumber	SiteCode	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	DLR	PQL	DIL	Flag
502283	03-ARDCL-002	09/30/2008	Liquid	E	80554	09/30/2008	09/30/2008	<i>E. coli</i> (3x5 MTF)	240	MPN/100mLs	SM 9221-B/F	2	2	1	
502286	03-DCAGR-020	09/30/2008	Liquid	E	80554	09/30/2008	09/30/2008	<i>E. coli</i> (3x5 MTF)	500	MPN/100mLs	SM 9221-B/F	2	2	1	
502285	03-DSAGR-014	09/30/2008	Liquid	E	80554	09/30/2008	09/30/2008	<i>E. coli</i> (3x5 MTF)	170	MPN/100mLs	SM 9221-B/F	2	2	1	
502284	03-MRSFD-008	09/30/2008	Liquid	E	80554	09/30/2008	09/30/2008	<i>E. coli</i> (3x5 MTF)	13	MPN/100mLs	SM 9221-B/F	2	2	1	

Table 18. Pesticide data for Event #1 (July 31, 2004). See Table 10 for Abbreviations.

Sample Number	Site Code	Sample Date	Sample Type	Analyte	Results	Units	Method	DLR	PQL	DIL	Prep Date	Analysis Date	Submission Number
01-ARDCL-012	ARDCL	07/31/2004	E	Azinphosmethyl	Not detected	ug/L	EPA 8141A	1.0	1.0	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Bolstar	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Coumaphos	Not detected	ug/L	EPA 8141A	0.20	0.20	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-011	ARDCL	07/31/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	08/04/2004 1115	08/05/2004 1802	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Def	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Demeton-S	Not detected	ug/L	EPA 8141A	0.20	0.20	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Dichlorvos	Not detected	ug/L	EPA 8141A	0.20	0.20	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Dimethoate	0.31	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Disulfoton	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-012	ARDCL	07/31/2004	E	EPN	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-012	ARDCL	07/31/2004	E	EPTC	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-011	ARDCL	07/31/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/04/2004 1115	08/05/2004 1802	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Ethion	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Ethoprop	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Fenamiphos	Not detected	ug/L	EPA 8141A	1.0	1.0	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Fensulfothion	Not detected	ug/L	EPA 8141A	0.50	0.50	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Fenthion	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-011	ARDCL	07/31/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/04/2004 1115	08/05/2004 1802	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Malathion	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Merphos	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Mevinphos	Not detected	ug/L	EPA 8141A	0.70	0.70	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Naled	Not detected	ug/L	EPA 8141A	0.50	0.50	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Parathion, ethyl	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Parathion, methyl	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/20/2004 0140	45039

01-ARDCL-011	ARDCL	07/31/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/04/2004 1115	08/05/2004 1802	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Phorate	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Prowl	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Ronnel	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Stirophos	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-011	ARDCL	07/31/2004	E	Surrogate: DECA	66.0	%	EPA 8081A	25-143	25-143	1	08/04/2004 1115	08/05/2004 1802	45039
01-ARDCL-011	ARDCL	07/31/2004	E	Surrogate: TCmX	50.7	%	EPA 8081A	25-144	25-144	1	08/04/2004 1115	08/05/2004 1802	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Surrogate: Tributylphosphate	95.6	%	EPA 8141A	60-150	60-150	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Surrogate: Triphenylphosphate	85.3	%	EPA 8141A	56-129	56-129	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Tokuthion	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Trichloronate	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/20/2004 0140	45039
01-ARDCL-012	ARDCL	07/31/2004	E	Trifluralin	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/20/2004 0140	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Azinphosmethyl	Not detected	ug/L	EPA 8141A	1.0	1.0	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Bolstar	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Chlorpyrifos	0.013	ug/L	EPA 8141A	0.05	0.05	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Coumaphos	Not detected	ug/L	EPA 8141A	0.20	0.20	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-040	DCAGR	07/31/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	08/04/2004 1115	08/05/2004 1916	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Def	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Demeton-S	Not detected	ug/L	EPA 8141A	0.20	0.20	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Dichlorvos	Not detected	ug/L	EPA 8141A	0.20	0.20	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Dimethoate	0.066	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Disulfoton	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-041	DCAGR	07/31/2004	E	EPN	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-041	DCAGR	07/31/2004	E	EPTC	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-040	DCAGR	07/31/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/04/2004 1115	08/05/2004 1916	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Ethion	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Ethoprop	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Fenamiphos	Not detected	ug/L	EPA 8141A	1.0	1.0	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Fensulfothion	Not detected	ug/L	EPA 8141A	0.50	0.50	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Fenthion	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1907	45039

01-DCAGR-040	DCAGR	07/31/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/04/2004 1115	08/05/2004 1916	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Malathion	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Merphos	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Mevinphos	Not detected	ug/L	EPA 8141A	0.70	0.70	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Naled	Not detected	ug/L	EPA 8141A	0.50	0.50	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Parathion, ethyl	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Parathion, methyl	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-040	DCAGR	07/31/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/04/2004 1115	08/05/2004 1916	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Phorate	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Prowl	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Ronnel	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Stirophos	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-040	DCAGR	07/31/2004	E	Surrogate: DECA	60.6	%	EPA 8081A	25-143	25-143	1	08/04/2004 1115	08/05/2004 1916	45039
01-DCAGR-040	DCAGR	07/31/2004	E	Surrogate: TCmX	45.8	Recovery %	EPA 8081A	25-144	25-144	1	08/04/2004 1115	08/05/2004 1916	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Surrogate: Tributylphosphate	77.9	Recovery %	EPA 8141A	60-150	60-150	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Surrogate: Triphenylphosphate	90.5	Recovery %	EPA 8141A	56-129	56-129	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Tokuthion	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Trichloronate	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1907	45039
01-DCAGR-041	DCAGR	07/31/2004	E	Trifluralin	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1907	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Azinphosmethyl	Not detected	ug/L	EPA 8141A	1.0	1.0	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Boistar	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Chlorpyrifos	0.017	ug/L	EPA 8141A	0.05	0.05	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Coumaphos	Not detected	ug/L	EPA 8141A	0.20	0.20	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-032	DSAGR	07/31/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	08/04/2004 1115	08/05/2004 1901	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Def	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Demeton-S	Not detected	ug/L	EPA 8141A	0.20	0.20	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Diázinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Dichlorvos	Not detected	ug/L	EPA 8141A	0.20	0.20	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Dimethoate	0.062	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Disulfoton	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-035	DSAGR	07/31/2004	E	EPN	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1836	45039

01-DSAGR-035	DSAGR	07/31/2004	E	EPTC	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-032	DSAGR	07/31/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/04/2004 1115	08/05/2004 1901	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Ethion	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Ethoprop	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Fenamiphos	Not detected	ug/L	EPA 8141A	1.0	1.0	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Fensulfothion	Not detected	ug/L	EPA 8141A	0.50	0.50	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Fenthion	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-032	DSAGR	07/31/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/04/2004 1115	08/05/2004 1901	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Malathion	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Merphos	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Mevinphos	Not detected	ug/L	EPA 8141A	0.70	0.70	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Naled	Not detected	ug/L	EPA 8141A	0.50	0.50	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Parathion, ethyl	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Parathion, methyl	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-032	DSAGR	07/31/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/04/2004 1115	08/05/2004 1901	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Phorate	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Prowl	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Ronnel	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Sirophos	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-032	DSAGR	07/31/2004	E	Surrogate: DECA	62.9	%	EPA 8081A	25-143	25-143	1	08/04/2004 1115	08/05/2004 1901	45039
01-DSAGR-032	DSAGR	07/31/2004	E	Surrogate: TCmX	48.8	%	EPA 8081A	25-144	25-144	1	08/04/2004 1115	08/05/2004 1901	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Surrogate: Tributylphosphate	79.6	%	EPA 8141A	60-150	60-150	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Surrogate: Triphenylphosphate	89.5	%	EPA 8141A	56-129	56-129	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Tokuthion	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Trichloronate	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1836	45039
01-DSAGR-035	DSAGR	07/31/2004	E	Trifluralin	0.045	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1836	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Azinphosmethyl	Not detected	ug/L	EPA 8141A	1.0	1.0	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Bolstar	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Coumaphos	Not detected	ug/L	EPA 8141A	0.20	0.20	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-017	MRSFD	07/31/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	08/04/2004 1115	08/05/2004 1817	45039

01-MRSFD-018	MRSFD	07/31/2004	E	Def	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Demeton-S	Not detected	ug/L	EPA 8141A	0.20	0.20	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Dichlorvos	Not detected	ug/L	EPA 8141A	0.20	0.20	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Dimethoate	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Disulfoton	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-018	MRSFD	07/31/2004	E	EPN	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-018	MRSFD	07/31/2004	E	EPTC	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-017	MRSFD	07/31/2004	E	Esfenvalerat6/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/04/2004 1115	08/05/2004 1817	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Ethion	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Ethoprop	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Fenamiphos	Not detected	ug/L	EPA 8141A	1.0	1.0	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Fensulfothion	Not detected	ug/L	EPA 8141A	0.50	0.50	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Fenthion	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-017	MRSFD	07/31/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/04/2004 1115	08/05/2004 1817	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Malathion	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Merphos	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Mevinphos	Not detected	ug/L	EPA 8141A	0.70	0.70	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Naled	Not detected	ug/L	EPA 8141A	0.50	0.50	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Parathion, ethyl	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Parathion, methyl	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-017	MRSFD	07/31/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/04/2004 1115	08/05/2004 1817	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Phorate	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Prowl	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Ronnel	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Stirophos	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-017	MRSFD	07/31/2004	E	Surrogate: DECA	89.2	%	EPA 8081A	25-143	25-143	1	08/04/2004 1115	08/05/2004 1817	45039
01-MRSFD-017	MRSFD	07/31/2004	E	Surrogate: TCmX	50.9	%	EPA 8081A	25-144	25-144	1	08/04/2004 1115	08/05/2004 1817	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Surrogate: Tributylphosphate	87.7	%	EPA 8141A	60-150	60-150	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Surrogate: Triphenylphosphate	79.3	%	EPA 8141A	56-129	56-129	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Tokuthion	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1703	45039

01-MRSFD-018	MRSFD	07/31/2004	E	Trichloronate	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1703	45039
01-MRSFD-018	MRSFD	07/31/2004	E	Trifluralin	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1703	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Azinphosmethyl	Not detected	ug/L	EPA 8141A	1.0	1.0	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Bolstar	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Coumaphos	Not detected	ug/L	EPA 8141A	0.20	0.20	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-030	DSAGR	07/31/2004	FB	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	08/04/2004 1115	08/05/2004 1832	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Def	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Demeton-S	Not detected	ug/L	EPA 8141A	0.20	0.20	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Dichlorvos	Not detected	ug/L	EPA 8141A	0.20	0.20	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Dimethoate	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Disulfoton	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	EPN	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	EPTC	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-030	DSAGR	07/31/2004	FB	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/04/2004 1115	08/05/2004 1832	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Ethion	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Ethoprop	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Fenamiphos	Not detected	ug/L	EPA 8141A	1.0	1.0	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Fensulfothion	Not detected	ug/L	EPA 8141A	0.50	0.50	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Fenitrothion	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-030	DSAGR	07/31/2004	FB	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/04/2004 1115	08/05/2004 1832	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Malathion	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Merphos	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Mevinphos	Not detected	ug/L	EPA 8141A	0.70	0.70	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Naled	Not detected	ug/L	EPA 8141A	0.50	0.50	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Parathion, ethyl	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Parathion, methyl	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-030	DSAGR	07/31/2004	FB	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/04/2004 1115	08/05/2004 1832	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Phorate	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Proxif	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1734	45039

01-DSAGR-033	DSAGR	07/31/2004	FB	Ronnel	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Stirophos	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-030	DSAGR	07/31/2004	FB	Surrogate: DECA	67.6	%	EPA 8081A	25-143	25-143	1	08/04/2004 1115	08/05/2004 1832	45039
01-DSAGR-030	DSAGR	07/31/2004	FB	Surrogate: TCmX	48.5	%	EPA 8081A	25-144	25-144	1	08/04/2004 1115	08/05/2004 1832	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Surrogate: Tributylphosphate	97.5	%	EPA 8141A	60-150	60-150	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Surrogate: Triphenylphosphate	95.0	%	EPA 8141A	56-129	56-129	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Tokuthion	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Trichloronate	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-033	DSAGR	07/31/2004	FB	Trifluralin	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1734	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Azinphosmethyl	Not detected	ug/L	EPA 8141A	1.0	1.0	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Bolstar	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Chlorpyrifos	0.045J	ug/L	EPA 8141A	0.05	0.05	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Coumaphos	Not detected	ug/L	EPA 8141A	0.20	0.20	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-031	DSAGR	07/31/2004	FD	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	08/04/2004 1115	08/05/2004 1847	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Def	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Demeton-S	Not detected	ug/L	EPA 8141A	0.20	0.20	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Dichlorvos	Not detected	ug/L	EPA 8141A	0.20	0.20	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Dimethoate	0.053	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Disulfoton	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	EPN	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	EPTC	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-031	DSAGR	07/31/2004	FD	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/04/2004 1115	08/05/2004 1847	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Ethion	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Ethoprop	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Fenamiphos	Not detected	ug/L	EPA 8141A	1.0	1.0	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Fensulfothion	Not detected	ug/L	EPA 8141A	0.50	0.50	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Fenthion	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-031	DSAGR	07/31/2004	FD	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/04/2004 1115	08/05/2004 1847	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Malathion	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Merphos	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1805	45039

01-DSAGR-034	DSAGR	07/31/2004	FD	Mevinphos	Not detected	ug/L	EPA 8141A	0.70	0.70	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Naled	Not detected	ug/L	EPA 8141A	0.50	0.50	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Parathion, ethyl	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Parathion, methyl	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-031	DSAGR	07/31/2004	FD	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	08/04/2004 1115	08/05/2004 1847	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Phorate	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Prowit	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Ronnel	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Stirophos	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-031	DSAGR	07/31/2004	FD	Surrogate: DECA	61.0	%	EPA 8081A	25-143	25-143	1	08/04/2004 1115	08/05/2004 1847	45039
01-DSAGR-031	DSAGR	07/31/2004	FD	Surrogate: TCmX	40.3	%	EPA 8081A	25-144	25-144	1	08/04/2004 1115	08/05/2004 1847	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Surrogate: Tributylphosphate	62.4	%	EPA 8141A	60-150	60-150	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Surrogate: Triphenylphosphate	70.0	%	EPA 8141A	56-129	56-129	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Tokuthion	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Trichloronate	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1805	45039
01-DSAGR-034	DSAGR	07/31/2004	FD	Trifluralin	0.34	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/12/2004 1805	45039

Table 19. Pesticide data for Event #2 (August 31, 2004). See Table 10 for Abbreviations.

Sample Number	Site Code	Sample Date	Sample Type	Analyte	Results	Units	Method	DLR	PQL	DIL	Prep Date	Analysis Date	Submission Number
02-ARDCL-007	ARDCL	08/31/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/07/2004 1300	09/18/2004 0657	45270
02-DCAGR-029	DCAGR	08/31/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/07/2004 1300	09/18/2004 0952	45270
02-DSAGR-021	DSAGR	08/31/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/07/2004 1300	09/18/2004 0923	45270
02-MRSFD-014	MRSFD	08/31/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/07/2004 1300	09/18/2004 0726	45270
02-ARDCL-006	ARDCL	08/31/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	09/07/2004 1300	09/11/2004 1147	45270
02-DCAGR-028	DCAGR	08/31/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	09/07/2004 1300	09/11/2004 1231	45270
02-DSAGR-020	DSAGR	08/31/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	09/07/2004 1300	09/11/2004 1217	45270
02-MRSFD-013	MRSFD	08/31/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	09/07/2004 1300	09/11/2004 1202	45270
02-ARDCL-007	ARDCL	08/31/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/07/2004 1300	09/18/2004 0657	45270
02-DCAGR-029	DCAGR	08/31/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/07/2004 1300	09/18/2004 0952	45270
02-DSAGR-021	DSAGR	08/31/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/07/2004 1300	09/18/2004 0923	45270
02-MRSFD-014	MRSFD	08/31/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/07/2004 1300	09/18/2004 0726	45270
02-ARDCL-006	ARDCL	08/31/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/07/2004 1300	09/11/2004 1147	45270
02-DCAGR-028	DCAGR	08/31/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/07/2004 1300	09/11/2004 1231	45270
02-DSAGR-020	DSAGR	08/31/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/07/2004 1300	09/11/2004 1217	45270
02-MRSFD-013	MRSFD	08/31/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/07/2004 1300	09/11/2004 1202	45270
02-ARDCL-006	ARDCL	08/31/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/07/2004 1300	09/11/2004 1147	45270
02-DCAGR-028	DCAGR	08/31/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/07/2004 1300	09/11/2004 1231	45270
02-DSAGR-020	DSAGR	08/31/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/07/2004 1300	09/11/2004 1217	45270
02-MRSFD-013	MRSFD	08/31/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/07/2004 1300	09/11/2004 1202	45270
02-ARDCL-006	ARDCL	08/31/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/07/2004 1300	09/11/2004 1147	45270
02-DCAGR-028	DCAGR	08/31/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/07/2004 1300	09/11/2004 1231	45270
02-DSAGR-020	DSAGR	08/31/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/07/2004 1300	09/11/2004 1217	45270
02-MRSFD-013	MRSFD	08/31/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/07/2004 1300	09/11/2004 1202	45270

02-ARDCL-006	ARDCL	08/31/2004	E	Surrogate: DECA	66.0	%	EPA	25-143	25-143	1	09/07/2004	09/11/2004	45270
						Recovery	8081A				1300	1147	
02-DCAGR-028	DCAGR	08/31/2004	E	Surrogate: DECA	63.7	%	EPA	25-143	25-143	1	09/07/2004	09/11/2004	45270
						Recovery	8081A				1300	1231	
02-DSAGR-020	DSAGR	08/31/2004	E	Surrogate: DECA	61.7	%	EPA	25-143	25-143	1	09/07/2004	09/11/2004	45270
						Recovery	8081A				1300	1217	
02-MRSFD-013	MRSFD	08/31/2004	E	Surrogate: DECA	68.5	%	EPA	25-143	25-143	1	09/07/2004	09/11/2004	45270
						Recovery	8081A				1300	1202	
02-ARDCL-006	ARDCL	08/31/2004	E	Surrogate: TCmX	45.4	%	EPA	25-144	25-144	1	09/07/2004	09/11/2004	45270
						Recovery	8081A				1300	1147	
02-DCAGR-028	DCAGR	08/31/2004	E	Surrogate: TCmX	46.1	%	EPA	25-144	25-144	1	09/07/2004	09/11/2004	45270
						Recovery	8081A				1300	1231	
02-DSAGR-020	DSAGR	08/31/2004	E	Surrogate: TCmX	43.5	%	EPA	25-144	25-144	1	09/07/2004	09/11/2004	45270
						Recovery	8081A				1300	1217	
02-MRSFD-013	MRSFD	08/31/2004	E	Surrogate: TCmX	47.2	%	EPA	25-144	25-144	1	09/07/2004	09/11/2004	45270
						Recovery	8081A				1300	1202	
02-ARDCL-007	ARDCL	08/31/2004	E	Surrogate: Tributylphosphate	106	%	EPA	60-150	60-150	1	09/07/2004	09/18/2004	45270
						Recovery	8141A				1300	0657	
02-DCAGR-029	DCAGR	08/31/2004	E	Surrogate: Tributylphosphate	102	%	EPA	60-150	60-150	1	09/07/2004	09/18/2004	45270
						Recovery	8141A				1300	0952	
02-DSAGR-021	DSAGR	08/31/2004	E	Surrogate: Tributylphosphate	101	%	EPA	60-150	60-150	1	09/07/2004	09/18/2004	45270
						Recovery	8141A				1300	0923	
02-MRSFD-014	MRSFD	08/31/2004	E	Surrogate: Tributylphosphate	101	%	EPA	60-150	60-150	1	09/07/2004	09/18/2004	45270
						Recovery	8141A				1300	0726	
02-ARDCL-007	ARDCL	08/31/2004	E	Surrogate: Triphenylphosphate	101	%	EPA	56-129	56-129	1	09/07/2004	09/18/2004	45270
						Recovery	8141A				1300	0657	
02-DCAGR-029	DCAGR	08/31/2004	E	Surrogate: Triphenylphosphate	91.0	%	EPA	56-129	56-129	1	09/07/2004	09/18/2004	45270
						Recovery	8141A				1300	0952	
02-DSAGR-021	DSAGR	08/31/2004	E	Surrogate: Triphenylphosphate	92.2	%	EPA	56-129	56-129	1	09/07/2004	09/18/2004	45270
						Recovery	8141A				1300	0923	
02-MRSFD-014	MRSFD	08/31/2004	E	Surrogate: Triphenylphosphate	90.9	%	EPA	56-129	56-129	1	09/07/2004	09/18/2004	45270
						Recovery	8141A				1300	0726	

Table 20. Pesticide data for Event #3 (September 29, 2004). See Table 10 for Abbreviations.

Sample Number	Site Code	Sample Date	Sample Type	Analyte	Results	Units	Method	DLR	PQL	DIL	Prep Date	Analysis Date	Submission Number
03-ARDCL-006	ARDCL	09/29/2004	E	Chlorpyrifos	0.026	ug/L	EPA 8141A	0.05	0.05	1	10/05/2004 1800	10/15/2004 0327	45481
03-ARDCL-005	ARDCL	09/29/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	10/05/2004 1800	10/15/2004 1013	45481
03-ARDCL-006	ARDCL	09/29/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	10/05/2004 1800	10/15/2004 0327	45481
03-ARDCL-005	ARDCL	09/29/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	10/05/2004 1800	10/15/2004 1013	45481
03-ARDCL-005	ARDCL	09/29/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	10/05/2004 1800	10/15/2004 1013	45481
03-ARDCL-005	ARDCL	09/29/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	10/05/2004 1800	10/15/2004 1013	45481
03-ARDCL-005	ARDCL	09/29/2004	E	Surrogate: DECA	73.9	%	EPA 8081A	25-143	25-143	1	10/05/2004 1800	10/15/2004 1013	45481
03-ARDCL-005	ARDCL	09/29/2004	E	Surrogate: TCmX	54.3	%	EPA 8081A	25-144	25-144	1	10/05/2004 1800	10/15/2004 1013	45481
03-ARDCL-006	ARDCL	09/29/2004	E	Surrogate: Tributylphosphate	87.4	%	EPA 8141A	60-150	60-150	1	10/05/2004 1800	10/15/2004 0327	45481
03-ARDCL-006	ARDCL	09/29/2004	E	Surrogate: Triphenylphosphate	85.0	%	EPA 8141A	56-129	56-129	1	10/05/2004 1800	10/15/2004 0327	45481
03-DCAGR-024	DCAGR	09/29/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	10/05/2004 1800	10/15/2004 0455	45481
03-DCAGR-023	DCAGR	09/29/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	10/05/2004 1800	10/15/2004 1057	45481
03-DCAGR-024	DCAGR	09/29/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	10/05/2004 1800	10/15/2004 0455	45481
03-DCAGR-023	DCAGR	09/29/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	10/05/2004 1800	10/15/2004 1057	45481
03-DCAGR-023	DCAGR	09/29/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	10/05/2004 1800	10/15/2004 1057	45481
03-DCAGR-023	DCAGR	09/29/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	10/05/2004 1800	10/15/2004 1057	45481
03-DCAGR-023	DCAGR	09/29/2004	E	Surrogate: DECA	78.2	%	EPA 8081A	25-143	25-143	1	10/05/2004 1800	10/15/2004 1057	45481
03-DCAGR-023	DCAGR	09/29/2004	E	Surrogate: TCmX	65.8	%	EPA 8081A	25-144	25-144	1	10/05/2004 1800	10/15/2004 1057	45481
03-DCAGR-024	DCAGR	09/29/2004	E	Surrogate: Tributylphosphate	126	%	EPA 8141A	60-150	60-150	1	10/05/2004 1800	10/15/2004 0455	45481
03-DCAGR-024	DCAGR	09/29/2004	E	Surrogate: Triphenylphosphate	119	%	EPA 8141A	56-129	56-129	1	10/05/2004 1800	10/15/2004 0455	45481
03-DSAGR-018	DSAGR	09/29/2004	E	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	10/05/2004 1800	10/15/2004 0426	45481
03-DSAGR-017	DSAGR	09/29/2004	E	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	10/05/2004 1800	10/15/2004 1042	45481
03-DSAGR-018	DSAGR	09/29/2004	E	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	10/05/2004 1800	10/15/2004 0426	45481
03-DSAGR-017	DSAGR	09/29/2004	E	Esfenvalerate/Fenvalerate	0.05	ug/L	EPA 8081A	0.02	0.02	1	10/05/2004 1800	10/15/2004 1042	45481
03-DSAGR-017	DSAGR	09/29/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	10/05/2004 1800	10/15/2004 1042	45481
03-DSAGR-017	DSAGR	09/29/2004	E	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	10/05/2004 1800	10/15/2004 1042	45481

03-DSAGR-017	DSAGR	09/29/2004	E	Surrogate: DECA	72.6	%	EPA	25-143	25-143	1	10/05/2004	10/15/2004	45481
						Recovery	8081A				1800	1042	
03-DSAGR-017	DSAGR	09/29/2004	E	Surrogate: TCmX	62.5	%	EPA	25-144	25-144	1	10/05/2004	10/15/2004	45481
						Recovery	8081A				1800	1042	
03-DSAGR-018	DSAGR	09/29/2004	E	Surrogate:	119	%	EPA	60-150	60-150	1	10/05/2004	10/15/2004	45481
				Tributylphosphate		Recovery	8141A				1800	0426	
03-DSAGR-018	DSAGR	09/29/2004	E	Surrogate:	105	%	EPA	56-129	56-129	1	10/05/2004	10/15/2004	45481
				Triphenylphosphate		Recovery	8141A				1800	0426	
03-MRSFD-012	MRSFD	09/29/2004	E	Chlorpyrifos	Not detected	ug/L	EPA	0.05	0.05	1	10/05/2004	10/15/2004	45481
					Not detected		8141A				1800	0356	
03-MRSFD-011	MRSFD	09/29/2004	E	Cypermethrin	Not detected	ug/L	EPA	0.10	0.10	1	10/05/2004	10/15/2004	45481
					Not detected		8081A				1800	1028	
03-MRSFD-012	MRSFD	09/29/2004	E	Diazinon	Not detected	ug/L	EPA	0.05	0.05	1	10/05/2004	10/15/2004	45481
					Not detected		8141A				1800	0356	
03-MRSFD-011	MRSFD	09/29/2004	E	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA	0.02	0.02	1	10/05/2004	10/15/2004	45481
					Not detected		8081A				1800	1028	
03-MRSFD-011	MRSFD	09/29/2004	E	Lambda cyhalothrin	Not detected	ug/L	EPA	0.02	0.02	1	10/05/2004	10/15/2004	45481
					Not detected		8081A				1800	1028	
03-MRSFD-011	MRSFD	09/29/2004	E	Permethrin	Not detected	ug/L	EPA	0.02	0.02	1	10/05/2004	10/15/2004	45481
					Not detected		8081A				1800	1028	
03-MRSFD-011	MRSFD	09/29/2004	E	Surrogate: DECA	80.1	%	EPA	25-143	25-143	1	10/05/2004	10/15/2004	45481
						Recovery	8081A				1800	1028	
03-MRSFD-011	MRSFD	09/29/2004	E	Surrogate: TCmX	50.0	%	EPA	25-144	25-144	1	10/05/2004	10/15/2004	45481
						Recovery	8081A				1800	1028	
03-MRSFD-012	MRSFD	09/29/2004	E	Surrogate:	116	%	EPA	60-150	60-150	1	10/05/2004	10/15/2004	45481
				Tributylphosphate		Recovery	8141A				1800	0356	
03-MRSFD-012	MRSFD	09/29/2004	E	Surrogate:	104	%	EPA	56-129	56-129	1	10/05/2004	10/15/2004	45481
				Triphenylphosphate		Recovery	8141A				1800	0356	

Analytical Method SOPs

After discussions with Regional Board staff, the reporting limits for diazinon and chloryprifos were lowered to 0.02 µg/L.

There were no deviations from the SOPs as provided in the QAPP. These are

- Water Column Toxicity – Appendix B, Attachments 1-3
- Sediment Toxicity – Appendix B, Attachment 4
- Organophosphorus Pesticides – Appendix B, Attachment 5
- Pyrethroid Pesticides – Appendix B, Attachment 6
- Color – Appendix B, Attachment 7
- Turbidity – Appendix B, Attachment 8
- TDS – Appendix B, Attachment 9
- TOC – Appendix B, Attachment 10
- *E. coli* – SOP not provided in original QAPP, SOP attached to this section

BSK Analytical Laboratories

SOP#: 0403006.2
Revision#: 1
Date: 04/01/05

E. coli by Multiple Tube Fermentation SM 9221F

1. Scope and Application
 - 1.1 Analytes: E. coli
 - 1.2 Detection Limit: 1.1 E. coli organism per 100 mL sample for a ten tube (1X10) test and 2 organisms per 100 mL for a 15 tube (3X5) test.
 - 1.3 Applicable Matrices: The E. coli MTF technique is applicable for the examination of E. coli in drinking water, waste water, and a variety of natural waters.
 - 1.4 Dynamics Range: <1.1 to >23.0 for the 1X10 test, and <2 to >1600 for the 3X5 test.
 - 1.5 Approximate Analytical Time : 3 days
2. Summary of Method
 - 2.1 A measured volume of water is dispensed into multiple tubes of Lauryl Tryptose Broth and incubated at 35C for 24-48 hours. Tubes showing fermentation is confirmed for presence of E. coli by transfer to EC-MUG media and incubated at 44.5 °C. E.coli possess the enzyme B-glucoronidase and are capable of cleaving the substrate MUG to release the fluoregen.
3. Comments
 - 3.1 Interference: Some glass test tubes have are naturally fluorecent under UV light. Transfer cultures in such tubes to another tube before determining results.
 - 3.2 Helpful Hints:
4. Safety Issues: Some E. coli are pathogens. Handle positive tubes using aseptic technique. Media with growth regardless whether E. coli positive or negative must be autoclaved before handing over to glassware washing.
5. Sample Collection, Preservation, Containers, and Holding Times
 - 5.1 Containers: Pre-sterilized plastic 120mL bottles with sodium thiosulfate.
 - 5.2 Storage: Refrigerate at 4⁰C
 - 5.3 Hold time: 30 hours for potable water and 6 hours for waste water.
6. Apparatus
 - 6.1 20 X 150 mm test tubes
 - 6.2 10 ml pipets
 - 6.3 1 ml pipets
 - 6.4 3mm inoculating loops
 - 6.5 ¼ dram vials (or 9x30mm)

- 6.6 Water bath at 44.5 +/- 0.2 °C
- 6.7 UV lamp (6W)
7. Reagents and Standards
 - 7.1 Lauryl Tryptose Broth (LTB)
 - 7.2 EC-MUG Media
8. Procedure
 - 8.1 Media:

Prepare LTB and EC-MUG media according to manufacturer's instructions on the label. Dispense 10 mL LTB into test tubes containing an inverted vial. Dispense 10 mL EC-MUG into test tubes without inverted vials.
 - 8.2 Presumptive Phase:
 - 8.2.1 For potable water (1X10): Arrange 10 tubes of double strength LTB in a row. Pipet 10 mL of samples into each tube.
 - 8.2.1 Waste water (3X5): Arrange 5 tubes of double strength LTB in the 1st row, 5 tubes of single strength LTB in the 2nd row, and another 5 tubes of single strength LTB in a 3rd row. Pipet 10 mL sample aliquots into the 1st row, 1 mL aliquots into the 2nd row, and 0.1 mL aliquots into the 3rd row.
 - 8.2.2 Incubate tubes at 35 +/- 0.5⁰C for 24+/- 2 hours. Examine tubes for a positive presumptive reaction which is presence of turbidity *and* gas formation in the inverted vials. Re-incubate tubes with a negative reaction for another 24+/-2 hours at 35°C,
 - 8.3 Confirmed Phase:

Gently shake or rotate tubes showing positive presumptive reaction and transfer a loopful to a EC-MUG Media tube. Incubate EC-MUG Media tubes at 44+/-0.2°C for 24+/-2 hours. Examine all tubes exhibiting growth for fluorescence using a long-wavelength UV lamp. Growth and presence of bright blue fluorescence constitutes a positive reaction. Compute and record E. coli MPN densities by using the MPN Index.
9. QA/QC Requirements
 - 9.1 QC Samples:
 - 9.1.1 Positive Control: For every day that EC-MUG media is used, inoculate one tube with a loopful of E. coli culture. Incubate at 44.5 +/- 0.2°C for 24 +/-2 hours. Tubes should show a positive E. coli reaction.
 - 9.1.2 Negative Control: For every day that EC-MUG media is used, inoculate one tube with a loopful of K. pneumoniae culture. Incubate at 44.5 +/- 0.2°C for 24 +/-2 hours. Tubes should show a negative E. coli reaction.
 - 9.1.3 For each batch of LTB media, inoculate one tube with E. aerogenes for positive control, one tube with P. aeruginosa for negative control. Incubate tubes at 35+/-0.5 °C for 48+/-3 hours.

9.1.4 Media sterility control: Incubate a tube of media from each batch at 35 +/- 0.5°C for 48 +/- 3 hours. Tubes should be clear.

9.2 Acceptance criteria: Incubation time and temperature as specified in section 8.2 and 8.3, and QC sample reactions as specified in section 9.1.

9.3 Corrective Action required :

10. Calculations: Calculate E. coli density according to the MPN tables.

MPN INDEX
Ten 10 ml Portions

No. of Positive tubes	MPN per 100ml
0	<1.1
1	1.1
2	2.2
3	3.6
4	5.1
5	6.9
6	9.2
7	12.0
8	16.1
9	23.0
10	>23.0

MPN INDEX
Five Tubes Per Dilution (10ml, 1.0ml, 0.1ml)

Combination of Positives	MPN per 100ml	Combination of Positives	MPN per 100ml
0-0-0	<2	4-3-0	27
0-0-1	2	4-3-1	33
0-1-0	2	4-4-0	34
0-2-0	4	5-0-0	23
1-0-0	2	5-0-1	30
1-0-1	4	5-0-2	40
1-1-0	4	5-1-0	30
1-1-1	6	5-1-1	50
1-2-0	6	5-1-2	60
2-0-0	4	5-2-0	50
2-0-1	7	5-2-1	70
2-1-0	7	5-2-2	90
2-1-1	9	5-3-0	80
2-2-0	9	5-3-1	110
2-3-0	12	5-3-2	140
3-0-0	8	5-3-3	170
3-0-1	11	5-4-0	130
3-1-0	11	5-4-1	170
3-1-1	14	5-4-2	220
3-2-0	14	5-4-3	280
3-2-1	17	5-4-4	350
4-0-0	13	5-5-0	240
4-0-1	17	5-5-1	300
4-1-0	17	5-5-2	500
4-1-1	21	5-5-3	900
4-1-2	26	5-5-4	1600
4-2-0	22	5-5-5	>1600
4-2-1	26		

11. Reporting

- 11.1 Reporting Units: MPN per 100 mL
- 11.2 Reporting Limits: 1.1 for a ten tube (1X10) test, and 2 for a 15 tube (3X5) test.
- 11.3 Values Below Detection Limit: report as "less than" detection limit.

12. References

- 12.1 Method Source: Standard Methods 19th Edition Section 9221F
- 12.2 Deviation From source method and rationale

13. Signatures

Laboratory Director _____

Section Manager _____

QC Supervisor _____

Laboratory Data Sheets

Laboratory QC Samples

Table 21. Quality Control results for physical parameters for Event #1 (July 31, 2004). See Table 10 for Abbreviations.

SampleNumber	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	D.L.R.	P.Q.L.	D.I.L.
477579	08/02/2004	LDUP	QC	76913	08/02/2004	08/02/2004	Color (A.P.H.A)	150	units	SM 2120 B	5	1	5
477580	08/02/2004	RBLK	QC	76913	08/02/2004	08/02/2004	Color (A.P.H.A)	ND	units	SM 2120 B	1	1	1
479163	08/04/2004	LDUP	QC	77121	08/04/2004	08/06/2004	Total Dissolved Solids (TDS)	1300	mg/L	SM 2540 C	5	5	1
479164	08/04/2004	RBLK	QC	77121	08/04/2004	08/06/2004	Total Dissolved Solids (TDS)	ND	mg/L	SM 2540 C	5	5	1
480760	08/09/2004	LCS	QC	77338	08/06/2004	08/06/2004	Total Organic Carbon (TOC)	5.2	mg/L	SM 5310-C	0.2	0.2	1
480921	08/09/2004	LCS	QC	77363	08/09/2004	08/09/2004	Total Organic Carbon (TOC)	5.3	mg/L	SM 5310-C	0.2	0.2	1
480761	08/09/2004	LCS	QC	77338	08/06/2004	08/06/2004	Total Organic Carbon (TOC)	5.3	mg/L	SM 5310-C	0.2	0.2	1
480922	08/09/2004	LCS	QC	77363	08/09/2004	08/09/2004	Total Organic Carbon (TOC)	5.3	mg/L	SM 5310-C	0.2	0.2	1
480762	08/09/2004	MS	QC	77338	08/06/2004	08/06/2004	Total Organic Carbon (TOC)	5.2	mg/L	SM 5310-C	0.2	0.2	1
480764	08/09/2004	MS	QC	77338	08/06/2004	08/06/2004	Total Organic Carbon (TOC)	28	mg/L	SM 5310-C	0.2	0.2	1
480925	08/09/2004	MS	QC	77363	08/09/2004	08/09/2004	Total Organic Carbon (TOC)	5.7	mg/L	SM 5310-C	0.2	0.2	1
480763	08/09/2004	MSD	QC	77338	08/06/2004	08/06/2004	Total Organic Carbon (TOC)	5.2	mg/L	SM 5310-C	0.2	0.2	1
480765	08/09/2004	MSD	QC	77338	08/06/2004	08/06/2004	Total Organic Carbon (TOC)	28	mg/L	SM 5310-C	0.2	0.2	1
480926	08/09/2004	MSD	QC	77363	08/09/2004	08/09/2004	Total Organic Carbon (TOC)	5.6	mg/L	SM 5310-C	0.2	0.2	1
480759	08/09/2004	RBLK	QC	77338	08/06/2004	08/06/2004	Total Organic Carbon (TOC)	ND	mg/L	SM 5310-C	0.2	0.2	1
480920	08/09/2004	RBLK	QC	77363	08/09/2004	08/09/2004	Total Organic Carbon (TOC)	ND	mg/L	SM 5310-C	0.2	0.2	1
477579	08/02/2004	LDUP	QC	76913	08/02/2004	08/02/2004	Turbidity	41	NTU	SM 2130 B	1.0	0.1	10
477580	08/02/2004	RBLK	QC	76913	08/02/2004	08/02/2004	Turbidity	ND	NTU	SM 2130 B	0.1	0.1	1

Table 22. Quality Control results for physical parameters for Event #2 (August 31, 2004). See Table 10 for Abbreviations.

SampleNumber	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	DLR	PQL	DIL
491402	09/02/2008	LDUP	QC	78822	09/02/2008	09/02/2008	Color (A.P.H.A)	ND	units	SM 2120 B	1	1	1
491403	09/02/2008	LDUP	QC	78822	09/02/2008	09/02/2008	Color (A.P.H.A)	20	units	SM 2120 B	1	1	1
491404	09/02/2008	RBLK	QC	78822	09/02/2008	09/02/2008	Color (A.P.H.A)	ND	units	SM 2120 B	1	1	1
492519	09/06/2008	LDUP	QC	78996	09/04/2008	09/09/2008	Total Dissolved Solids (TDS)	580	mg/L	SM 2540 C	5	5	1
492518	09/06/2008	RBLK	QC	78996	09/04/2008	09/09/2008	Total Dissolved Solids (TDS)	ND	mg/L	SM 2540 C	5	5	1
491559	09/03/2008	LCS	QC	78862	09/03/2008	09/03/2008	Total Organic Carbon (TOC)	5.2	mg/L	SM 3310-C	0.2	0.2	1
491560	09/03/2008	LCS	QC	78862	09/03/2008	09/03/2008	Total Organic Carbon (TOC)	5.3	mg/L	SM 3310-C	0.2	0.2	1
491561	09/03/2008	MS	QC	78862	09/03/2008	09/03/2008	Total Organic Carbon (TOC)	6.2	mg/L	SM 3310-C	0.2	0.2	1
491563	09/03/2008	MS	QC	78862	09/03/2008	09/03/2008	Total Organic Carbon (TOC)	13	mg/L	SM 3310-C	0.2	0.2	1
491562	09/03/2008	MSD	QC	78862	09/03/2008	09/03/2008	Total Organic Carbon (TOC)	6.2	mg/L	SM 3310-C	0.2	0.2	1
491564	09/03/2008	MSD	QC	78862	09/03/2008	09/03/2008	Total Organic Carbon (TOC)	13	mg/L	SM 3310-C	0.2	0.2	1
491558	09/03/2008	RBLK	QC	78862	09/03/2008	09/03/2008	Total Organic Carbon (TOC)	ND	mg/L	SM 3310-C	0.2	0.2	1
491402	09/02/2008	LDUP	QC	78822	09/02/2008	09/02/2008	Turbidity	ND	NTU	SM 2130 B	0.1	0.1	1
491403	09/02/2008	LDUP	QC	78822	09/02/2008	09/02/2008	Turbidity	1.4	NTU	SM 2130 B	0.1	0.1	1
491404	09/02/2008	RBLK	QC	78822	09/02/2008	09/02/2008	Turbidity	ND	NTU	SM 2130 B	0.1	0.1	1

Table 23. Quality Control results for physical parameters for Event #3 (September 29, 2004). See Table 10 for Abbreviations.

SampleNumber	SampleDate	Matrix	SampleType	Run	PrepDate	AnalysisDate	Analyte	Results	Units	Method	DLR	PQL	DIL
502863	10/01/2008	LDUP	QC	80419	10/01/2008	10/01/2008	Color (A.P.H.A)	ND	units	SM 2120 B	1	1	1
502864	10/01/2008	RBLK	QC	80419	10/01/2008	10/01/2008	Color (A.P.H.A)	ND	units	SM 2120 B	1	1	1
503984	10/05/2008	LDUP	QC	80604	10/05/2008	10/07/2008	Total Dissolved Solids (TDS)	2400	mg/L	SM 2540 C	5	5	1
503985	10/05/2008	RBLK	QC	80604	10/05/2008	10/07/2008	Total Dissolved Solids (TDS)	ND	mg/L	SM 2540 C	5	5	1
505627	10/08/2008	LCS	QC	80827	10/07/2008	10/07/2008	Total Organic Carbon (TOC)	5.1	mg/L	SM 5310-C	0.2	0.2	1
506540	10/12/2008	LCS	QC	81017	10/09/2008	10/09/2008	Total Organic Carbon (TOC)	5.1	mg/L	SM 5310-C	0.2	0.2	1
505628	10/08/2008	LCS	QC	80827	10/07/2008	10/07/2008	Total Organic Carbon (TOC)	5.2	mg/L	SM 5310-C	0.2	0.2	1
506541	10/12/2008	LCS	QC	81017	10/09/2008	10/09/2008	Total Organic Carbon (TOC)	5.1	mg/L	SM 5310-C	0.2	0.2	1
505629	10/08/2008	MS	QC	80827	10/07/2008	10/07/2008	Total Organic Carbon (TOC)	6.6	mg/L	SM 5310-C	0.2	0.2	1
506542	10/12/2008	MS	QC	81017	10/09/2008	10/09/2008	Total Organic Carbon (TOC)	5.9	mg/L	SM 5310-C	0.2	0.2	1
506544	10/12/2008	MS	QC	81017	10/09/2008	10/09/2008	Total Organic Carbon (TOC)	8.6	mg/L	SM 5310-C	0.2	0.2	1
505630	10/08/2008	MSD	QC	80827	10/07/2008	10/07/2008	Total Organic Carbon (TOC)	6.6	mg/L	SM 5310-C	0.2	0.2	1
506543	10/12/2008	MSD	QC	81017	10/09/2008	10/09/2008	Total Organic Carbon (TOC)	5.9	mg/L	SM 5310-C	0.2	0.2	1
506545	10/12/2008	MSD	QC	81017	10/09/2008	10/09/2008	Total Organic Carbon (TOC)	8.6	mg/L	SM 5310-C	0.2	0.2	1
505626	10/08/2008	RBLK	QC	80827	10/07/2008	10/07/2008	Total Organic Carbon (TOC)	ND	mg/L	SM 5310-C	0.2	0.2	1
506539	10/12/2008	RBLK	QC	81017	10/09/2008	10/09/2008	Total Organic Carbon (TOC)	ND	mg/L	SM 5310-C	0.2	0.2	1
502863	10/01/2008	LDUP	QC	80419	10/01/2008	10/01/2008	Turbidity	0.20	NTU	SM 2130 B	0.1	0.1	1
502864	10/01/2008	RBLK	QC	80419	10/01/2008	10/01/2008	Turbidity	ND	NTU	SM 2130 B	0.1	0.1	1

Table 24. Quality Control results for pesticide analyses for Event #1 (July 31, 2004). See Table 10 for Abbreviations.

Sample Number	Sample Date	Sample Type	Analyte	Results	Units	Method	DLR	PQL	DIL	Prep Date	Analysis Date	Submission Number	Comment
N040803A-BLK	07/31/2004	QC	Azinphosmethyl	Not detected	ug/L	EPA 8141A	1.0	1.0	1	08/03/2004	08/11/2004	45039	
N040803A-LCS	07/31/2004	QC	Azinphosmethyl	84.4	%	EPA 8141A	36-189	36-189	1	08/03/2004	2257	45039	
N040803A-MS	07/31/2004	QC	Azinphosmethyl	108	Recovery %	EPA 8141A	36-189	36-189	1	08/03/2004	2328	45039	
N040803A-MSD	07/31/2004	QC	Azinphosmethyl	104	Recovery %	EPA 8141A	36-189	36-189	1	08/03/2004	1138	45039	
N040803A-BLK	07/31/2004	QC	Bolstar	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004	1209	45039	
N040803A-LCS	07/31/2004	QC	Bolstar	73.8	%	EPA 8141A	43-119	43-119	1	08/03/2004	2257	45039	
N040803A-MS	07/31/2004	QC	Bolstar	84.0	Recovery %	EPA 8141A	43-119	43-119	1	08/03/2004	2328	45039	
N040803A-MSD	07/31/2004	QC	Bolstar	76.6	Recovery %	EPA 8141A	43-119	43-119	1	08/03/2004	1138	45039	
N040803A-BLK	07/31/2004	QC	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	08/03/2004	1209	45039	
N040803A-LCS	07/31/2004	QC	Chlorpyrifos	78.6	%	EPA 8141A	61-125	61-125	1	08/03/2004	08/11/2004	45039	
N040803A-MS	07/31/2004	QC	Chlorpyrifos	90.3	Recovery %	EPA 8141A	61-125	61-125	1	08/03/2004	2257	45039	
N040803A-MSD	07/31/2004	QC	Chlorpyrifos	101	Recovery %	EPA 8141A	61-125	61-125	1	08/03/2004	2328	45039	
N040803A-BLK	07/31/2004	QC	Coumaphos	Not detected	ug/L	EPA 8141A	0.20	0.20	1	08/03/2004	1138	45039	
N040803A-LCS	07/31/2004	QC	Coumaphos	84.8	%	EPA 8141A	60-124	60-124	1	08/03/2004	1209	45039	
N040803A-MS	07/31/2004	QC	Coumaphos	103	Recovery %	EPA 8141A	60-124	60-124	1	08/03/2004	08/11/2004	45039	
N040803A-MSD	07/31/2004	QC	Coumaphos	107	Recovery %	EPA 8141A	60-124	60-124	1	08/03/2004	2257	45039	
L040804A-BLK	07/31/2004	QC	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	08/04/2004	1704	45039	
L040804A-LCS	07/31/2004	QC	Cypermethrin	94.5	%	EPA 8081A	65-135	65-135	1	08/04/2004	1718	45039	
L040804A-MS	07/31/2004	QC	Cypermethrin	90.0	Recovery %	EPA 8081A	65-135	65-135	1	08/04/2004	1733	45039	
L040804A-MSD	07/31/2004	QC	Cypermethrin	86.0	Recovery %	EPA 8081A	65-135	65-135	1	08/04/2004	08/05/2004	45039	
N040803A-BLK	07/31/2004	QC	Def	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004	1748	45039	
N040803A-LCS	07/31/2004	QC	Def	90.1	Recovery %	EPA 8141A	60-118	60-118	1	08/03/2004	2257	45039	
N040803A-MS	07/31/2004	QC	Def	98.0	Recovery %	EPA 8141A	60-118	60-118	1	08/03/2004	2328	45039	
N040803A-MSD	07/31/2004	QC	Def	90.5	Recovery %	EPA 8141A	60-118	60-118	1	08/03/2004	1138	45039	
N040803A-BLK	07/31/2004	QC	Demeton-S	Not detected	ug/L	EPA 8141A	0.20	0.20	1	08/03/2004	1209	45039	
						EPA 8141A				1600	2257	45039	

N040803A-LCS	QC	Demeton-S	47.7	% Recovery	EPA 8141A	12-85	12-85	1	08/03/2004	08/11/2004	45039
N040803A-MS	QC	Demeton-S	82.5	% Recovery	EPA 8141A	12-85	12-85	1	1600	2328	45039
N040803A-MSD	QC	Demeton-S	76.2	% Recovery	EPA 8141A	12-85	12-85	1	1600	1138	45039
N040803A-BLK	QC	Diazinon	Not detected	ug/L Recovery	EPA 8141A	0.05	0.05	1	08/03/2004	08/11/2004	45039
N040803A-LCS	QC	Diazinon	83.2	% Recovery	EPA 8141A	57-130	57-130	1	1600	2257	45039
N040803A-MS	QC	Diazinon	89.6	% Recovery	EPA 8141A	57-130	57-130	1	1600	2328	45039
N040803A-MSD	QC	Diazinon	86.9	% Recovery	EPA 8141A	57-130	57-130	1	1600	1138	45039
N040803A-BLK	QC	Dichlorvos	Not detected	ug/L Recovery	EPA 8141A	0.20	0.20	1	1600	1209	45039
N040803A-LCS	QC	Dichlorvos	101	% Recovery	EPA 8141A	46-141	46-141	1	1600	2257	45039
N040803A-MS	QC	Dichlorvos	105	% Recovery	EPA 8141A	46-141	46-141	1	1600	2328	45039
N040803A-MSD	QC	Dichlorvos	93.1	% Recovery	EPA 8141A	46-141	46-141	1	1600	1138	45039
N040803A-BLK	QC	Dimethoate	Not detected	ug/L Recovery	EPA 8141A	0.10	0.10	1	1600	1209	45039
N040803A-LCS	QC	Dimethoate	128	% Recovery	EPA 8141A	68-202	68-202	1	1600	2257	45039
N040803A-MS	QC	Dimethoate	178	% Recovery	EPA 8141A	68-202	68-202	1	1600	2328	45039
N040803A-MSD	QC	Dimethoate	165	% Recovery	EPA 8141A	68-202	68-202	1	1600	1138	45039
N040803A-BLK	QC	Disulfoton	Not detected	ug/L Recovery	EPA 8141A	0.10	0.10	1	1600	1209	45039
N040803A-LCS	QC	Disulfoton	76.2	% Recovery	EPA 8141A	47-117	47-117	1	1600	2257	45039
N040803A-MS	QC	Disulfoton	106	% Recovery	EPA 8141A	47-117	47-117	1	1600	2328	45039
N040803A-MSD	QC	Disulfoton	99.5	% Recovery	EPA 8141A	47-117	47-117	1	1600	1138	45039
N040803A-BLK	QC	EPN	Not detected	ug/L Recovery	EPA 8141A	0.10	0.10	1	1600	1209	45039
N040803A-LCS	QC	EPN	97.6	% Recovery	EPA 8141A	57-133	57-133	1	1600	2257	45039
N040803A-MS	QC	EPN	122	% Recovery	EPA 8141A	57-133	57-133	1	1600	2328	45039
N040803A-MSD	QC	EPN	130	% Recovery	EPA 8141A	57-133	57-133	1	1600	1138	45039
N040803A-BLK	QC	EPTC	Not detected	ug/L Recovery	EPA 8141A	0.10	0.10	1	1600	1209	45039
N040803A-LCS	QC	EPTC	66.4	% Recovery	EPA 8141A	39-133	39-133	1	1600	2257	45039
N040803A-MS	QC	EPTC	97.8	% Recovery	EPA 8141A	39-133	39-133	1	1600	2328	45039
N040803A-MSD	QC	EPTC	87.2	% Recovery	EPA 8141A	39-133	39-133	1	1600	1138	45039
L040804A-BLK	QC	Esfenvalerate/Fenvalerate	Not detected	ug/L Recovery	EPA 8081A	0.02	0.02	1	08/04/2004	08/05/2004	45039
L040804A-LCS	QC	Esfenvalerate/Fenvalerate	94.5	% Recovery	EPA 8081A	65-135	65-135	1	1115	1704	45039
L040804A-MS	QC	Esfenvalerate/Fenvalerate	91.2	% Recovery	EPA 8081A	65-135	65-135	1	1115	1718	45039
L040804A-MSD	QC	Esfenvalerate/Fenvalerate	87.0	% Recovery	EPA 8081A	65-135	65-135	1	1115	1733	45039
									08/04/2004	08/05/2004	45039
									1115	1748	45039

N040803A-BLK	QC	07/31/2004	Ethion	Not detected	ug/L	EPA	0.10	0.10	1	08/03/2004	08/11/2004	45039
N040803A-LCS	QC	07/31/2004	Ethion	88.4	%	EPA	65-134	65-134	1	1600	2257	45039
N040803A-MS	QC	07/31/2004	Ethion	108	%	EPA	65-134	65-134	1	1600	2328	45039
N040803A-MSD	QC	07/31/2004	Ethion	116	%	EPA	65-134	65-134	1	1600	1138	45039
N040803A-BLK	QC	07/31/2004	Ethioprop	Not detected	ug/L	EPA	0.10	0.10	1	08/03/2004	08/11/2004	45039
N040803A-LCS	QC	07/31/2004	Ethioprop	81.2	%	EPA	65-125	65-125	1	1600	2257	45039
N040803A-MS	QC	07/31/2004	Ethioprop	90.3	%	EPA	65-125	65-125	1	1600	2328	45039
N040803A-MSD	QC	07/31/2004	Ethioprop	83.8	%	EPA	65-125	65-125	1	1600	1138	45039
N040803A-BLK	QC	07/31/2004	Fenamiphos	Not detected	ug/L	EPA	1.0	1.0	1	08/03/2004	08/11/2004	45039
N040803A-LCS	QC	07/31/2004	Fenamiphos	105	%	EPA	40-135	40-135	1	1600	2257	45039
N040803A-MS	QC	07/31/2004	Fenamiphos	77.0	%	EPA	40-135	40-135	1	1600	2328	45039
N040803A-MSD	QC	07/31/2004	Fenamiphos	92.7	%	EPA	40-135	40-135	1	1600	1138	45039
N040803A-BLK	QC	07/31/2004	Fensulfiothion	Not detected	ug/L	EPA	0.50	0.50	1	08/03/2004	08/11/2004	45039
N040803A-LCS	QC	07/31/2004	Fensulfiothion	94.4	%	EPA	54-161	54-161	1	1600	2257	45039
N040803A-MS	QC	07/31/2004	Fensulfiothion	121	%	EPA	54-161	54-161	1	1600	2328	45039
N040803A-MSD	QC	07/31/2004	Fensulfiothion	120	%	EPA	54-161	54-161	1	1600	1138	45039
N040803A-BLK	QC	07/31/2004	Fenthion	Not detected	ug/L	EPA	0.10	0.10	1	08/03/2004	08/11/2004	45039
N040803A-LCS	QC	07/31/2004	Fenthion	87.6	%	EPA	50-118	50-118	1	1600	2257	45039
N040803A-MS	QC	07/31/2004	Fenthion	104	%	EPA	50-118	50-118	1	1600	2328	45039
N040803A-MSD	QC	07/31/2004	Fenthion	105	%	EPA	50-118	50-118	1	1600	1138	45039
L040804A-BLK	QC	07/31/2004	Lambda cyhalothrin	Not detected	ug/L	EPA	0.02	0.02	1	08/04/2004	08/07/2004	45039
L040804A-LCS	QC	07/31/2004	Lambda cyhalothrin	90.5	%	EPA	65-135	65-135	1	1115	1704	45039
L040804A-MS	QC	07/31/2004	Lambda cyhalothrin	89.5	%	EPA	65-135	65-135	1	1115	1718	45039
L040804A-MSD	QC	07/31/2004	Lambda cyhalothrin	84.5	%	EPA	65-135	65-135	1	1115	1733	45039
N040803A-BLK	QC	07/31/2004	Malathion	Not detected	ug/L	EPA	0.10	0.10	1	08/03/2004	08/11/2004	45039
N040803A-LCS	QC	07/31/2004	Malathion	90.8	%	EPA	47-125	47-125	1	1600	2257	45039
N040803A-MS	QC	07/31/2004	Malathion	119	%	EPA	47-125	47-125	1	1600	2328	45039
N040803A-MSD	QC	07/31/2004	Malathion	121	%	EPA	47-125	47-125	1	1600	1138	45039
N040803A-BLK	QC	07/31/2004	Merphos	Not detected	ug/L	EPA	0.10	0.10	1	08/03/2004	08/11/2004	45039
N040803A-LCS	QC	07/31/2004	Merphos	94.2	%	EPA	54-114	54-114	1	1600	2257	45039
N040803A-MS	QC	07/31/2004	Merphos	111	%	EPA	54-114	54-114	1	1600	2328	45039
					Recovery	8141A				1600	1138	

N040803A-BLK	07/31/2004	QC	Rommel	Not detected	ug/L	EPA	0.10	0.10	1	08/03/2004	08/11/2004	45039
N040803A-LCS	07/31/2004	QC	Rommel	86.4	% Recovery	8141A	53-114	53-114	1	1600	2257	45039
N040803A-MS	07/31/2004	QC	Rommel	98.9	% Recovery	8141A	53-114	53-114	1	1600	2328	45039
N040803A-MSD	07/31/2004	QC	Rommel	99.4	% Recovery	8141A	53-114	53-114	1	1600	1138	45039
N040803A-BLK	07/31/2004	QC	Strophos	Not detected	ug/L	8141A	0.10	0.10	1	1600	1209	45039
N040803A-LCS	07/31/2004	QC	Strophos	97.2	% Recovery	8141A	68-128	68-128	1	1600	2257	45039
N040803A-MS	07/31/2004	QC	Strophos	99.5	% Recovery	8141A	68-128	68-128	1	1600	2328	45039
N040803A-MSD	07/31/2004	QC	Strophos	108	% Recovery	8141A	68-128	68-128	1	1600	1138	45039
L040804A-BLK	07/31/2004	QC	Surrogate: DECA	64.7	% Recovery	8141A	25-143	25-143	1	1600	1209	45039
L040804A-LCS	07/31/2004	QC	Surrogate: DECA	75.0	% Recovery	8081A	25-143	25-143	1	1115	1704	45039
L040804A-MS	07/31/2004	QC	Surrogate: DECA	70.3	% Recovery	8081A	25-143	25-143	1	1115	1718	45039
L040804A-MSD	07/31/2004	QC	Surrogate: DECA	69.2	% Recovery	8081A	25-143	25-143	1	1115	1733	45039
L040804A-BLK	07/31/2004	QC	Surrogate: TCmX	35.3	% Recovery	8081A	25-144	25-144	1	1115	1748	45039
L040804A-LCS	07/31/2004	QC	Surrogate: TCmX	37.7	% Recovery	8081A	25-144	25-144	1	1115	1704	45039
L040804A-MS	07/31/2004	QC	Surrogate: TCmX	56.5	% Recovery	8081A	25-144	25-144	1	1115	1718	45039
L040804A-MSD	07/31/2004	QC	Surrogate: TCmX	49.8	% Recovery	8081A	25-144	25-144	1	1115	1733	45039
N040803A-BLK	07/31/2004	QC	Surrogate: TCmX	92.3	% Recovery	8081A	60-150	60-150	1	1600	1748	45039
N040803A-LCS	07/31/2004	QC	Surrogate: TCmX	97.5	% Recovery	8141A	60-150	60-150	1	1600	2257	45039
N040803A-MS	07/31/2004	QC	Surrogate: TCmX	101	% Recovery	8141A	60-150	60-150	1	1600	2328	45039
N040803A-MSD	07/31/2004	QC	Surrogate: TCmX	94.0	% Recovery	8141A	60-150	60-150	1	1600	1138	45039
N040803A-BLK	07/31/2004	QC	Surrogate: TCmX	81.1	% Recovery	8141A	56-129	56-129	1	1600	1209	45039
N040803A-LCS	07/31/2004	QC	Surrogate: TCmX	90.1	% Recovery	8141A	56-129	56-129	1	1600	2257	45039
N040803A-MS	07/31/2004	QC	Surrogate: TCmX	91.0	% Recovery	8141A	56-129	56-129	1	1600	2328	45039
N040803A-MSD	07/31/2004	QC	Surrogate: TCmX	82.5	% Recovery	8141A	56-129	56-129	1	1600	1138	45039
N040803A-BLK	07/31/2004	QC	Surrogate: TCmX	Not detected	ug/L	8141A	0.10	0.10	1	1600	1209	45039
N040803A-LCS	07/31/2004	QC	Surrogate: TCmX	70.4	% Recovery	8141A	56-123	56-123	1	1600	2328	45039
N040803A-MS	07/31/2004	QC	Surrogate: TCmX	82.0	% Recovery	8141A	56-123	56-123	1	1600	1138	45039
N040803A-MSD	07/31/2004	QC	Surrogate: TCmX	76.0	% Recovery	8141A	56-123	56-123	1	1600	2328	45039
N040803A-BLK	07/31/2004	QC	Surrogate: TCmX	Not detected	ug/L	8141A	0.10	0.10	1	1600	1209	45039
N040803A-LCS	07/31/2004	QC	Surrogate: TCmX	83.0	% Recovery	8141A	43-113	43-113	1	1600	2257	45039
N040803A-MS	07/31/2004	QC	Surrogate: TCmX	112	% Recovery	8141A	43-113	43-113	1	1600	2328	45039
N040803A-MSD	07/31/2004	QC	Surrogate: TCmX	Not detected	ug/L	8141A	1600	1600	1	1600	1138	45039

Sample ID	Date	QC	Trichloronate	114	% Recovery	EPA 8141A	43-113	43-113	1	08/03/2004	08/07/2004	45039	% Recovery above the upper control limit
N040803A-MSD	07/31/2004	QC	Trichloronate	114	% Recovery	EPA 8141A	43-113	43-113	1	08/03/2004 1600	08/07/2004 1209	45039	% Recovery above the upper control limit
N040803A-BLK	07/31/2004	QC	Trifluralin	Not detected	ug/L	EPA 8141A	0.10	0.10	1	08/03/2004 1600	08/11/2004 2257	45039	% Recovery above the upper control limit
N040803A-LCS	07/31/2004	QC	Trifluralin	68.6	% Recovery	EPA 8141A	44-117	44-117	1	08/03/2004 1600	08/11/2004 2328	45039	% Recovery above the upper control limit
N040803A-MS	07/31/2004	QC	Trifluralin	129	% Recovery	EPA 8141A	44-117	44-117	1	08/03/2004 1600	08/07/2004 1138	45039	% Recovery above the upper control limit
N040803A-MSD	07/31/2004	QC	Trifluralin	117	% Recovery	EPA 8141A	44-117	44-117	1	08/03/2004 1600	08/07/2004 1209	45039	% Recovery above the upper control limit

Table 25. Quality Control results for pesticide analyses for Event #2 (August 31, 2004). See Table 10 for Abbreviations.

Sample Number	Sample Date	Sample Type	Analyte	Results	Units	Method	DLR	PQL	DIL	Prep Date	Analysis Date	Submission Number	Comment
N040907A-BLK	08/31/2004	QC	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/07/2004	09/18/2004	45270	
N040907A-LCS	08/31/2004	QC	Chlorpyrifos	89.0	%	EPA 8141A	61-125	61-125	1	09/07/2004	09/18/2004	45270	
N040907A-MS	08/31/2004	QC	Chlorpyrifos	84.6	%	EPA 8141A	61-125	61-125	1	09/07/2004	09/18/2004	45270	
N040907A-MSD	08/31/2004	QC	Chlorpyrifos	86.4	%	EPA 8141A	61-125	61-125	1	09/07/2004	09/18/2004	45270	
L040907A-BLK	08/31/2004	QC	Cypermethrin	Not detected	ug/L	EPA 8081A	0.10	0.10	1	09/07/2004	09/11/2004	45270	
L040907A-LCS	08/31/2004	QC	Cypermethrin	89.6	%	EPA 8081A	65-135	65-135	1	09/07/2004	09/11/2004	45270	
L040907A-MS	08/31/2004	QC	Cypermethrin	88.0	%	EPA 8081A	65-135	65-135	1	09/07/2004	09/11/2004	45270	
L040907A-MSD	08/31/2004	QC	Cypermethrin	93.8	%	EPA 8081A	65-135	65-135	1	09/07/2004	09/11/2004	45270	
N040907A-BLK	08/31/2004	QC	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	09/07/2004	09/18/2004	45270	
N040907A-LCS	08/31/2004	QC	Diazinon	89.6	%	EPA 8141A	57-130	57-130	1	09/07/2004	09/18/2004	45270	
N040907A-MS	08/31/2004	QC	Diazinon	85.0	%	EPA 8141A	57-130	57-130	1	09/07/2004	09/18/2004	45270	
N040907A-MSD	08/31/2004	QC	Diazinon	83.5	%	EPA 8141A	57-130	57-130	1	09/07/2004	09/18/2004	45270	
L040907A-BLK	08/31/2004	QC	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/07/2004	09/11/2004	45270	
L040907A-LCS	08/31/2004	QC	Esfenvalerate/Fenvalerate	90.0	%	EPA 8081A	65-135	65-135	1	09/07/2004	09/11/2004	45270	
L040907A-MS	08/31/2004	QC	Esfenvalerate/Fenvalerate	88.4	%	EPA 8081A	65-135	65-135	1	09/07/2004	09/11/2004	45270	
L040907A-MSD	08/31/2004	QC	Esfenvalerate/Fenvalerate	92.4	%	EPA 8081A	65-135	65-135	1	09/07/2004	09/11/2004	45270	
L040907A-BLK	08/31/2004	QC	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/07/2004	09/11/2004	45270	
L040907A-LCS	08/31/2004	QC	Lambda cyhalothrin	88.4	%	EPA 8081A	65-135	65-135	1	09/07/2004	09/11/2004	45270	
L040907A-MS	08/31/2004	QC	Lambda cyhalothrin	87.6	%	EPA 8081A	65-135	65-135	1	09/07/2004	09/11/2004	45270	
L040907A-MSD	08/31/2004	QC	Lambda cyhalothrin	93.6	%	EPA 8081A	65-135	65-135	1	09/07/2004	09/11/2004	45270	
L040907A-BLK	08/31/2004	QC	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	09/07/2004	09/11/2004	45270	
L040907A-LCS	08/31/2004	QC	Permethrin	82.0	%	EPA 8081A	65-135	65-135	1	09/07/2004	09/11/2004	45270	
L040907A-MS	08/31/2004	QC	Permethrin	78.8	%	EPA 8081A	65-135	65-135	1	09/07/2004	09/11/2004	45270	
L040907A-MSD	08/31/2004	QC	Permethrin	92.4	%	EPA 8081A	65-135	65-135	1	09/07/2004	09/11/2004	45270	

L040907A-BLK	QC	08/31/2004	Surrogate: DECA	71.6	% Recovery	EPA 8081A	25-143	25-143	1	09/07/2004 1300	09/11/2004 1049	45270	
L040907A-LCS	QC	08/31/2004	Surrogate: DECA	66.3	% Recovery	EPA 8081A	25-143	25-143	1	09/07/2004 1300	09/11/2004 1103	45270	
L040907A-MS	QC	08/31/2004	Surrogate: DECA	64.3	% Recovery	EPA 8081A	25-143	25-143	1	09/07/2004 1300	09/11/2004 1118	45270	
L040907A-MSD	QC	08/31/2004	Surrogate: DECA	66.0	% Recovery	EPA 8081A	25-143	25-143	1	09/07/2004 1300	09/11/2004 1133	45270	
L040907A-BLK	QC	08/31/2004	Surrogate: TCmX	40.0	% Recovery	EPA 8081A	25-144	25-144	1	09/07/2004 1300	09/11/2004 1049	45270	% Recovery exceeds the lower control limit
L040907A-LCS	QC	08/31/2004	Surrogate: TCmX	19.2	% Recovery	EPA 8081A	25-144	25-144	1	09/07/2004 1300	09/11/2004 1103	45270	
L040907A-MS	QC	08/31/2004	Surrogate: TCmX	51.0	% Recovery	EPA 8081A	25-144	25-144	1	09/07/2004 1300	09/11/2004 1118	45270	
L040907A-MSD	QC	08/31/2004	Surrogate: TCmX	49.7	% Recovery	EPA 8081A	25-144	25-144	1	09/07/2004 1300	09/11/2004 1133	45270	
N040907A-BLK	QC	08/31/2004	Surrogate: Tributylphosphate	106	% Recovery	EPA 8141A	60-150	60-150	1	09/07/2004 1300	09/18/2004 0501	45270	
N040907A-LCS	QC	08/31/2004	Surrogate: Tributylphosphate	106	% Recovery	EPA 8141A	60-150	60-150	1	09/07/2004 1300	09/18/2004 0530	45270	
N040907A-MS	QC	08/31/2004	Surrogate: Tributylphosphate	102	% Recovery	EPA 8141A	60-150	60-150	1	09/07/2004 1300	09/18/2004 0559	45270	
N040907A-MSD	QC	08/31/2004	Surrogate: Tributylphosphate	101	% Recovery	EPA 8141A	60-150	60-150	1	09/07/2004 1300	09/18/2004 0559	45270	
N040907A-BLK	QC	08/31/2004	Surrogate: Triphenylphosphate	90.1	% Recovery	EPA 8141A	56-129	56-129	1	09/07/2004 1300	09/18/2004 0501	45270	
N040907A-LCS	QC	08/31/2004	Surrogate: Triphenylphosphate	97.6	% Recovery	EPA 8141A	56-129	56-129	1	09/07/2004 1300	09/18/2004 0530	45270	
N040907A-MS	QC	08/31/2004	Surrogate: Triphenylphosphate	88.6	% Recovery	EPA 8141A	56-129	56-129	1	09/07/2004 1300	09/18/2004 0559	45270	
N040907A-MSD	QC	08/31/2004	Surrogate: Triphenylphosphate	86.8	% Recovery	EPA 8141A	56-129	56-129	1	09/07/2004 1300	09/18/2004 0559	45270	

Table 26. Quality Control results for pesticide analyses for Event #3 (September 29, 2004). See Table 10 for Abbreviations.

Sample Number	Sample Date	Sample Type	Analyte	Results	Units	Method	DLR	PQL	DIL	Prep Date	Analysis Date	Submission Number
N041005A-BLK	09/29/2004	QC	Chlorpyrifos	Not detected	ug/L	EPA 8141A	0.05	0.05	1	10/05/2004	10/15/2004	45481
N041005A-LCS	09/29/2004	QC	Chlorpyrifos	94.8	%	EPA 8141A	61-125	61-125	1	10/05/2004	10/15/2004	45481
N041005A-MS	09/29/2004	QC	Chlorpyrifos	86.6	%	EPA 8141A	61-125	61-125	1	10/05/2004	10/15/2004	45481
N041005A-MSD	09/29/2004	QC	Chlorpyrifos	85.4	%	EPA 8141A	61-125	61-125	1	10/05/2004	10/15/2004	45481
L041005A-BLK	09/29/2004	QC	Cypermethrin	Not detected	ug/L	EPA 8141A	0.10	0.10	1	10/05/2004	10/15/2004	45481
L041005A-LCS	09/29/2004	QC	Cypermethrin	85.6	%	EPA 8081A	65-135	65-135	1	10/05/2004	10/15/2004	45481
L041005A-MS	09/29/2004	QC	Cypermethrin	91.2	%	EPA 8081A	65-135	65-135	1	10/05/2004	10/15/2004	45481
L041005A-MSD	09/29/2004	QC	Cypermethrin	101	%	EPA 8081A	65-135	65-135	1	10/05/2004	10/15/2004	45481
N041005A-BLK	09/29/2004	QC	Diazinon	Not detected	ug/L	EPA 8141A	0.05	0.05	1	10/05/2004	10/15/2004	45481
N041005A-LCS	09/29/2004	QC	Diazinon	96.2	%	EPA 8141A	57-130	57-130	1	10/05/2004	10/15/2004	45481
N041005A-MS	09/29/2004	QC	Diazinon	87.8	%	EPA 8141A	57-130	57-130	1	10/05/2004	10/15/2004	45481
N041005A-MSD	09/29/2004	QC	Diazinon	87.0	%	EPA 8141A	57-130	57-130	1	10/05/2004	10/15/2004	45481
L041005A-BLK	09/29/2004	QC	Esfenvalerate/Fenvalerate	Not detected	ug/L	EPA 8081A	0.02	0.02	1	10/05/2004	10/15/2004	45481
L041005A-LCS	09/29/2004	QC	Esfenvalerate/Fenvalerate	84.0	%	EPA 8081A	65-135	65-135	1	10/05/2004	10/15/2004	45481
L041005A-MS	09/29/2004	QC	Esfenvalerate/Fenvalerate	85.6	%	EPA 8081A	65-135	65-135	1	10/05/2004	10/15/2004	45481
L041005A-MSD	09/29/2004	QC	Esfenvalerate/Fenvalerate	99.6	%	EPA 8081A	65-135	65-135	1	10/05/2004	10/15/2004	45481
L041005A-BLK	09/29/2004	QC	Lambda cyhalothrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	10/05/2004	10/15/2004	45481
L041005A-LCS	09/29/2004	QC	Lambda cyhalothrin	82.0	%	EPA 8081A	65-135	65-135	1	10/05/2004	10/15/2004	45481
L041005A-MS	09/29/2004	QC	Lambda cyhalothrin	97.6	%	EPA 8081A	65-135	65-135	1	10/05/2004	10/15/2004	45481
L041005A-MSD	09/29/2004	QC	Lambda cyhalothrin	90.4	%	EPA 8081A	65-135	65-135	1	10/05/2004	10/15/2004	45481
L041005A-BLK	09/29/2004	QC	Permethrin	Not detected	ug/L	EPA 8081A	0.02	0.02	1	10/05/2004	10/15/2004	45481
L041005A-LCS	09/29/2004	QC	Permethrin	111	%	EPA 8081A	65-135	65-135	1	10/05/2004	10/15/2004	45481
L041005A-MS	09/29/2004	QC	Permethrin	77.2	%	EPA 8081A	65-135	65-135	1	10/05/2004	10/15/2004	45481
L041005A-MSD	09/29/2004	QC	Permethrin	74.4	%	EPA 8081A	65-135	65-135	1	10/05/2004	10/15/2004	45481

L041005A-BLK	09/29/2004	OC	Surrogate: DECA	84.0	% Recovery	EPA 8081A	25-143	1	10/05/2004	10/15/2004	45481
L041005A-LCS	09/29/2004	OC	Surrogate: DECA	85.3	% Recovery	EPA 8081A	25-143	1	10/05/2004	10/15/2004	45481
L041005A-MS	09/29/2004	OC	Surrogate: DECA	79.3	% Recovery	EPA 8081A	25-143	1	10/05/2004	10/15/2004	45481
L041005A-MSD	09/29/2004	OC	Surrogate: DECA	84.3	% Recovery	EPA 8081A	25-143	1	10/05/2004	10/15/2004	45481
L041005A-BLK	09/29/2004	OC	Surrogate: TCmX	42.4	% Recovery	EPA 8081A	25-144	1	10/05/2004	10/15/2004	45481
L041005A-LCS	09/29/2004	OC	Surrogate: TCmX	58.0	% Recovery	EPA 8081A	25-144	1	10/05/2004	10/15/2004	45481
L041005A-MS	09/29/2004	OC	Surrogate: TCmX	58.3	% Recovery	EPA 8081A	25-144	1	10/05/2004	10/15/2004	45481
L041005A-MSD	09/29/2004	OC	Surrogate: TCmX	70.0	% Recovery	EPA 8081A	25-144	1	10/05/2004	10/15/2004	45481
N041005A-BLK	09/29/2004	OC	Surrogate: Tributylphosphate	97.0	% Recovery	EPA 8141A	60-150	1	10/05/2004	10/15/2004	45481
N041005A-LCS	09/29/2004	OC	Surrogate: Tributylphosphate	112	% Recovery	EPA 8141A	60-150	1	10/05/2004	10/15/2004	45481
N041005A-MS	09/29/2004	OC	Surrogate: Tributylphosphate	107	% Recovery	EPA 8141A	60-150	1	10/05/2004	10/15/2004	45481
N041005A-MSD	09/29/2004	OC	Surrogate: Tributylphosphate	104	% Recovery	EPA 8141A	60-150	1	10/05/2004	10/15/2004	45481
N041005A-BLK	09/29/2004	OC	Surrogate: Triphenylphosphate	92.0	% Recovery	EPA 8141A	56-129	1	10/05/2004	10/15/2004	45481
N041005A-LCS	09/29/2004	OC	Surrogate: Triphenylphosphate	95.5	% Recovery	EPA 8141A	56-129	1	10/05/2004	10/15/2004	45481
N041005A-MS	09/29/2004	OC	Surrogate: Triphenylphosphate	95.0	% Recovery	EPA 8141A	56-129	1	10/05/2004	10/15/2004	45481
N041005A-MSD	09/29/2004	OC	Surrogate: Triphenylphosphate	95.4	% Recovery	EPA 8141A	56-129	1	10/05/2004	10/15/2004	45481

Toxicity Testing

Table 27. Results of *Selanastrum capricornutum* chronic toxicity testing for the three events.

	Site	Mean cells/mL x 10 ⁶
Event 1	Lab control	0.592
	01-ARDCL-007	2.506
	01-MRSFD-013	1.534
	01-DSAGR-020	2.776
	01-DCAGR-036	3.088
Event 2	Lab control	0.915
	02-ARDCL-001	2.652
	02-MRSFD-008	1.303
	02-DSAGR-015	2.493
	02-DCAGR-022	2.316
Event 3	Lab control	1.660
	03-ARDCL-001	2.670
	03-MRSFD-007	1.370
	03-DSAGR-013	1.220*
	03-DCAGR-019	1.630

*Statistically different from the laboratory control at $p = 0.05$.

Table 28. Results of *Ceriodaphnia dubia* acute toxicity testing for the three events.

	Site	% Survival
Event 1	Lab control	95
	01-ARDCL-007	100
	01-MRSFD-013	75*
	01-DSAGR-020	95
	01-DCAGR-036	90
Event 2	Lab control	95
	02-ARDCL-001	100
	02-MRSFD-008	40*
	02-DSAGR-015	100
	02-DCAGR-022	95
Persistence sampling	Lab control	100
	02-MRSFD-030	100
Event 3	Lab control	100
	03-ARDCL-001	100
	03-MRSFD-007	100
	03-DSAGR-013	100
	03-DCAGR-019	95

*Statistically different from the laboratory control at $p = 0.05$.

Table 29. Targeted TIE results for the Merced River @ Santa Fe Drive (MRSFD) ambient water (collected August 31, 2004).

Ambient Water TIE Treatment	% Survival
Lab control	90
Centrifugation blank	55
C-8 SPE blank	100
100 µg/L PBO blank	85
100% MRSFD	95
100% MRSFD + centrifugation	25
100% MRSFD + C-8 SPE	100
100% MRSFD + PBO	100

Table 30. Results of the fathead minnow acute toxicity testing for the three events.

	Site	% Survival
Event 1	Lab control	90
	01-ARDCL-007	90
	01-MRSFD-013	100
	01-DSAGR-020	95
	01-DCAGR-036	100
Event 2	Lab control	95
	02-ARDCL-001	100
	02-MRSFD-008	65
	02-DSAGR-015	95
	02-DCAGR-022	80
Event 3	Lab control	100
	03-ARDCL-001	95
	03-MRSFD-007	95
	03-DSAGR-013	100
	03-DCAGR-019	95

Table 31. Results of Event 2 sediment toxicity testing on *Hyaella azteca* survival.

Site	% Survival
Lab control	95
02-ARDCL-002	95.8
02-MRSFD-009	97.5
02-DSAGR-016	33.8*
02DCAGR-023	98.8

*Statistically different from the laboratory control at $p = 0.05$.

Table 32. Results of Event 2 sediment toxicity testing on *Hyaella azteca* growth.

Site	Overall mean growth (mg)
Lab control	0.016
02-ARDCL-002	0.148
02-MRSFD-009	0.155
02-DSAGR-016	0.062
02-DCAGR-023	0.089

Table 33. Event #1 intra-laboratory *S. capricornutum* toxicity testing of water field duplicate samples (quality control).

Treatment	Mean cells/mL x 10 ⁶
DSAGR-019	2.662
DSAGR-020	2.776
	RPD = 4.2%

Table 34. Event #1 intra-laboratory *C. dubia* toxicity testing of ambient water field duplicate samples (quality control).

Treatment	% Survival
DSAGR-019	100
DSAGR-020	95
	RPD = 5.1%

Table 35. Event #1 intra-laboratory fathead minnow toxicity testing of ambient water field duplicate samples (quality control).

Treatment	% Survival
DSAGR-019	100
DSAGR-020	95
	RPD = 5.1%

Table 36. Event #2 intra-laboratory *H. azteca* toxicity testing of sediment field duplicate samples (quality control).

Treatment	% Survival
DSAGR-023	98.8
DSAGR-024	92.5
	RPD = 6.6%

Raw Data

See Appendix I.

Data Interpretation

Data Assessment

Irrigation Season – Toxicity and Chemical Analyses

Event 1

Toxicity testing - One site, Merced River at Santa Fe Drive, exhibited significantly reduced survival of *Ceriodaphnia* compared to the laboratory controls. Survival of the *Ceriodaphnia* in the control was 95% and the survival in the sample was 75%. Because the survival was not below 50%, a TIE was not initiated. Water chemistry data did not detect any pesticides in the sample. Consequently, we are unable to identify the cause of the toxicity. Due to confusion over the language in the Conditional Waiver and logistic problems with the laboratory, an additional sample was not collected to test for persistence. A communication report was filed with the Regional Board on September 10, 2004.

No toxicity was observed in the algae with the growth of algal samples from all sites exceeding the growth of the laboratory control. Additionally, there was no toxicity in the fathead minnow tests with the survival in all samples equaling or exceeding the survival of the laboratory controls.

Water chemistry – Chemical analysis on water from all sites indicated detections of three pesticides in sample. Dimethoate was detected at 0.31 µg/L at the August Road Drain, chlorpyrifos and trifluralin were both detected at 0.045 µg/L at Duck Slough. A duplicate sample was taken at Duck Slough, and the duplicate resulted in no detection of chlorpyrifos. Trifluralin was not detected in the original sample but was detected in the duplicate. Both were reported at below the method detection limit of 0.05 µg/L so their presence in the sample at 0.045 µg/L is not certain. Physical parameters were within the normal ranges for water with the exception of total dissolved solids at August Road Drain @ Crows Landing with a TDS measure of 1400mg/L and an *E. coli* measure of 1600 MPN/100ml at Dutchman's Creek @ Gurr Road, 350 MPN/100ml at Duck Slough at Gurr Road, and 300 MPN/100ml at August Road Drain @ Crows Landing. Electrical conductivity at August Road Drain @ Crows Landing exceeded the water quality objective (2082 µmhos/cm).

Event 2

Toxicity testing – No toxicity was observed at any site during algae testing. One site, Merced River at Santa Fe Drive exhibited significant toxicity to *Ceriodaphnia* and a second sample was collected to determine if the toxicity was persistent. In addition, a Toxicity Identification Evaluation (TIE) was performed to determine the cause of the toxicity. There was no toxicity observed in the follow-up sample indicating that the toxicity was not persistent. By the time the TIE was performed, a retest of the sample indicated that no toxicity was present and the results of the TIE were inconclusive.

Consequently, no cause could be assigned to the toxicity seen at the site. The lack of persistence makes it difficult to interpret the results with respect to effects on organisms in the water at the site. Agricultural chemicals such as chlorpyrifos, permethrin, or esfenvalerate, if present in sufficient quantities to cause toxicity, should have been detectable by water chemistry (see below). We did not test for a large number of agricultural chemicals or surfactants that could cause toxicity, however, the TIE process should have provided an indication that these classes of compounds were present in sufficient quantity to cause toxicity. Centrifugation of the sample failed to remove the toxicity indicating that the toxicant is in the dissolved phase. Metals are the only class of compounds that could be present in the dissolved phase that was not examined by either water chemistry or the TIE process. No toxicity was observed for fathead minnows although the toxicity at Merced River was lower than all other sites. A communication report was submitted to the Regional Board on September 10, 2004.

Results of the sediment toxicity testing indicate that the sample from Duck Slough was toxic to *Hyalella* with only 34% survival compared to 95% survival of the control. No statistically significant reduction in growth was detected.

Water chemistry – Chemical analysis on water from all sites indicated no detections of pesticides in any sample. Data collected in the field were well within the normal ranges for water quality objectives. Physical parameters were within the normal ranges of water quality objectives except for a TDS of 700 mg/L at August Road Drain @ Crows Landing, and *E. coli* measures of 1600 MPN/100ml for Dutchman's Creek @ Gurr Road, and 300 MPN/100ml at August Road Drain @ Crows Landing. Electrical conductivity at August Road Drain @ Crows Landing exceeded the water quality objective (1093 $\mu\text{mhos/cm}$).

Event 3

Toxicity testing – Significantly reduced growth of algae was observed at Duck Slough. There was no toxicity to *Ceriodaphnia* or fathead minnows at any site. Algal TIEs were not performed. Due to a reporting error by the laboratory, no toxicity was noted and therefore no follow up sample was collected. A communication report was submitted to the Regional Board on November 6, 2004.

Water chemistry – Chemical analysis on water from all sites indicated detections of esfenvalerate at 0.05 $\mu\text{g/L}$ at Duck Slough, and diazinon at 0.026 $\mu\text{g/L}$ at August Road Drain. No duplicate samples were collected to replicate the results. Data collected in the field were well within the normal ranges for Central Valley waterways. Laboratory pH of the sample from August Road Drain was 9.0, although the field data indicated that the pH of the sample was 8.26. TDS was found above the water quality objective at two sites; August Road Drain (700 mg/L), and Duck Slough (540 mg/L), and *E. coli* was found above the water quality objective at two sites; August Road Drain @ Crows Landing (240 MPN/100ml, and Dutchman's Creek at Gurr Road (500 MPN/100ml). Electrical conductivity at August Road Drain @ Crows Landing exceeded the water quality objective (1022 $\mu\text{mhos/cm}$).

The second sample collected on August 31 was significantly toxic to *Ceriodaphnia* and at a level of toxicity that allowed a TIE to be performed. However, the results of the TIE were inconclusive as the toxicity was not persistent in the original sample, and water chemistry revealed no chemicals present in the water.

Dormant Season

Data are currently unavailable for the dormant season, but we have been informed that samples from the first storm event did not generate any toxicity to any test organism. Samples from the second storm event have generated significant toxicity when compared to laboratory controls. Two samples, the Merced River @ Santa Fe Drive and Lone Willow Slough at @ Madera Ave experienced a reduced survival of *S. capricornutum* compared to the laboratory control. The Lone Willow Slough sample experienced a 70.2% reduction, and an algal TIE has been initiated to identify a cause. A field duplicate of the Merced River site did not experience any reduction in growth compared to a 23.8% reduction in the original sample. Both the original sample and the field duplicate are being retested. If the reduced growth in the original sample persists, a TIE will not be initiated because a 23% reduction is unlikely to provide sufficient toxicity for a TIE to effectively identify a cause. A second sample will be collected from the Lone Willow site and if the toxicity persists in the Merced River site, an additional sample will be collected as well. A Communication Report will be filed when the results of the retest are available.

Was Monitoring Sufficient to Characterize Water Quality

The Coalition believes that sampling conducted during the summer irrigation season was sufficient to characterize water quality for the sites selected. We were unable to identify the constituent responsible for toxicity at the two sites that experienced toxicity. In two instances, the TIE trigger was not met, and in another case, the retest of the sample during the TIE resulted in no toxicity. Sampling is being expanded during the current dormant season and will continue through Phase I. The larger number of watersheds will allow us to characterize discharge over a wide variety of crops and locations in the Coalition region.

Did Data Meet Water Quality Objectives

Water Quality Objectives relevant to the Coalition are provided in Table 37. The water quality from the ESJWQC did not meet water quality objectives for 18 parameters as summarized in Table 38.

Table 37. Relevant Water Quality Objectives for the ESJ Coalition Region.

<i>Basin Plan Objectives</i>						
Analyte	Units	MDL	WQO	WQO Basis	Application	
Temperature	°F	NA	narr.	<5°F increase above natural	All waters designated WARM or COLD	
Dissolved Oxygen	mg/L	NA	5.0	Minimum	waters designated WARM	
			7.0	Minimum	waters designated COLD	
pH	-log[H ⁺]	NA	6.5-8.5	"appropriate averaging period" protective of beneficial uses	All waters	
Conductivity	µmhos/cm	NA	900	NA	California secondary MCL	
Color	CU	2	narr.	NA	All waters	
Turbidity	NTU	0.1	narr.	NA	All waters	
Total Dissolved Solids (TDS)	mg/L	6	500	NA	California secondary MCL	
Total Suspended Solids (TSS)	mg/L	2	narr.	NA	All waters	
<i>E. Coli</i> bacteria	MPN/100mL	2	126	5-sample geometric mean;	waters designated REC-1	
			235	Single sample max	waters designated REC-1	
<i>Other Objectives</i>						
Analyte	Units	MDL	WQO	WQO Basis	Application	
Chlorpyrifos	µg/L	0.005	0.014	4-day average	All receiving waters (CDFG 2000)	
			0.02	1-hour maximum		
Diazinon	µg/L	0.005	0.05	4-day average	All receiving waters (CDFG 2000)	
			0.08	1-hour maximum		
<i>Monitored Analytes Without Objectives</i>						
Analyte	Units	MDL	WQO	WQO Basis	Application	
Total Organic Carbon (TOC)	mg/L	0.3	none	NA	NA	

Table 38. Exceedances of water quality objectives during 2004 irrigation sampling events.

Event	Sample	Water Quality Objective Exceedance
Event 1	ARDCR	TDS <i>E. coli</i> EC
	DSAGR	<i>E. coli</i>
	DCAGR	<i>E. coli</i>
	MRSFD	<i>C. dubia</i> (water column toxicity)
Event 2	ARDCR	TDS <i>E. coli</i> EC
	DCAGR	<i>E. coli</i>
	MRSFD	<i>C. dubia</i> (water column toxicity)
	DSAGR	<i>H. azteca</i> (sediment toxicity)
Event 3	ARDCR	TDS <i>E. coli</i> EC
	DSAGR	TDS <i>E. coli</i>
		<i>S. capricornutum</i> (water column toxicity)

Where are Improvements Needed

As the Coalition increases the number of monitoring sites and increases the number of samples collected during the 2005 irrigation season, characterization of discharge from irrigated agriculture will improve. The Coalition is seeking to improve communications with the laboratories to allow the Coalition to understand more quickly when toxicity has occurred. Rapid communication will allow additional samples to be collected in a timely manner, and TIEs to be initiated if the toxicity triggers have been reached.

Detection limits for organophosphate pesticides were not low enough to detect the presence of diazinon and chlorpyrifos at levels required by the Regional Board. We informed the analytical laboratory that the detection limit needed to be lower and they complied with the request. The minimum detection limit study was submitted to the Regional Board last fall for review. The lower detection limits will be used starting with the 2005 dormant season sampling.

Additional goals for the laboratory analyses include improvements on surrogate recoveries and upper and lower recovery percentages in the matrix spikes. In both instances, we feel that the recoveries can be improved over those reported for the irrigation season 2004.

Types of Management Practices

Obtaining information on management practices was addressed in the March 11, 2005 memo to the Regional Board and is provided below.

“A software program to compile BMPs of coalition members is in the process of being developed through a PRISM grant managed by the Coalition for Urban Rural Environmental Stewardship. This software will be provided free to coalition groups for use in their data management systems.

Timeline: The first draft of the software is expected to be completed by July 2005. The final software is expected to be available by September 2005 with the Coalition receiving the software shortly thereafter. Data entering from the above surveys will begin immediately with totals and data analysis completed by October 2005.”

Types of Pesticides

Obtaining information on pesticide use was addressed in the March 11, 2005 memo to the Regional Board and is provided below.

“Should toxicity or exceedances be detected in monitoring performed by the Coalition or Regional Board, the Coalition will determine potential sources by examining Pesticide Use Reports and cropping of the upstream subwatershed that drains into that site.”

We have queried all counties in the Coalition region and have obtained, or will shortly obtain, pesticide use reports for the irrigation season starting July 2004, and also the dormant season from February through March 2005. We are currently working through the databases available, and will continue to work through the databases to characterize pesticide use in watersheds with water quality exceedances. We have preliminary data for Ash Slough (Table 8), which are presented to provide an example of what we will be able to develop for all watersheds. The data for Ash Slough needs to be grouped into products with the same active ingredient, and will be organized so that we can obtain pesticide use in the periods immediately preceding the sampling.

Actions taken to address water quality impacts identified

Toxicity at Merced River @ Santa Fe and Duck Slough

After sampling indicated toxicity of unknown cause(s), the County Agricultural Commissioner and several local growers reported that because of easy access, the Merced River site is frequently used as a trash dump by local individuals and also serves as a dump-site for illegal production of methamphetamines. If we detect positive toxicity in future test results, the coalition will attempt to determine if the toxicity is a function of agricultural activities or dumping at the site. This will be accomplished by sampling, at a site slightly upstream on private property where dumping could not occur. If the toxicity is a result of dumping at the Merced River at Santa Fe site, there should be no toxicity slightly upstream. If the toxicity is the result of upstream agricultural activities, we should observe the toxicity in both samples. If toxicity is sufficient to trigger a TIE, we will institute procedures to remove metals from the sample to determine if metals are the cause. The remaining TIE procedures will be followed as they were last year.

In addition to modifying the testing procedures to be conducted next year, the ESJ Coalition is involved in an additional effort to identify and eliminate the source of the toxicity. First, to identify the potential sources, and assuming that metals might be the cause of the toxicity, we have requested all of the Pesticide Use Reports for the watersheds above the Duck Slough at Gurr Road site, and the Merced River at Santa Fe site. The County Agricultural Commissioners have been extremely helpful and are providing those data in an Excel format. We have separately requested the parcel level data from the county and those data are either available or forthcoming. For the Duck Slough site, we will match the pesticide use with the parcel information to determine where within the watershed metals could have been applied. Unfortunately, the PURs are compiled based on a township-range-section system, while parcel data are simply given APNs. Matching the files of parcel level data with the PURs is a very slow process. Also, the PURs contain tens of thousands of lines of information, even for small windows of time, slowing the search process further. Finally, Merced County has requested that they provide the results for the 2004 Irrigation season and the 2005 Dormant season in a single database to reduce staff time and the drain on the resources of their office. We anticipate that we will receive the pesticide use data for the Merced River at Santa Fe watershed in early April. As we work through those data, we will update the Regional Board on our progress. Because the cause of the toxicity is currently unknown for both sites, the ESJ Coalition will take the following steps based on the results of the PUR database search and toxicity testing during the 2005 Irrigation season: 1) using 2004 PURs, identify and quantify the chemicals that could be potential sources of toxicity to *Ceriodaphnia* and *Selanastrum* (for the Merced River and Duck Slough sites respectively), 2) determine through testing if toxicity is present in 2005, 3) perform TIEs (if toxicity trigger is exceeded) to evaluate the potential causes of toxicity including metals, 4) increase the list of chemicals tested during water chemistry analyses to include those that could be causes of toxicity to the species, 5) obtain 2005 PURs for the watershed, and 6) use the results of the toxicity tests, TIEs (if performed), water

chemistry, and PUR data on location of applications in a weight-of-evidence approach to identify cause(s) and potential source(s).

Several exceedances of the *E. coli* standards were experienced during the summer in all three sampling events. There are numerous dairies in the Coalition region, and while it is possible that *E. coli* come from the dairies, sampling was unable to determine the source. If *E. coli* remains high at sites sampled during the 2005 irrigation season, we will sample upstream to identify the source of the coliforms.

Despite the fact that the cause of toxicity from water sampling last summer was unknown, the ESJ Coalition initiated a series of outreach meetings in the Coalition region in March 2005. The meetings, located in Merced (3-9-05), Madera (3-22-05) and Modesto (3-24-05), provided growers and crop advisors with updates on the monitoring results outlined above. Also presented was information on Best Management Practices to protect water quality for row crops and orchards, including detailed descriptions of label changes for diazinon use as a dormant orchard spray. The goal of the meetings was to outline to growers and crop advisors the activities that the Coalition was responsible for performing as a follow up to monitoring of local waterways such as identification of sources and promotion of management measures to correct the problem. A total of 250 growers and crop advisors attended the three meetings.

Dormant Season

Two storms during the dormant season were sampled, one on February 16, 2005, and the other on March 21-22, 2005. At the time this Monitoring Report was prepared, no toxicity has been observed at sites in the Coalition region. Water quality data are not yet available to determine if pesticides were detected. Four sites were not sampled during one or both storms. The sites A and B were not sampled due to safety considerations at the site. Both were bridge sites and the sampling crew determined that the shoulder was not sufficient to afford protection from traffic. Two other sites, Ash Slough at Avenue 21 and the Highline Canal at Lombardy Road did not contain any water despite significant rainfall and standing water in fields adjacent to the water bodies. Ash Slough did not contain any water during the irrigation season as well. If we find that Ash Slough does not maintain sufficient water for sampling by June 2005, we will select a new site. For the two sites with safety issues, we will find a suitable location on the same water body within the immediate vicinity to sample. If this is not possible, we will move to another site on the list submitted to the Regional Board on January 20, 2005.

Communication Reports

East San Joaquin Water Quality Coalition

1201 L Street
Modesto, CA 95354
www.esjcoalition.org

September 10, 2004

TO: William Marshall, Director Surface Water Division
William Croyle, Ag Drainage Waiver Unit
Shakoor Azimi, Ag Drainage Waiver Unit
Central Valley Regional Water Quality Control Board

FROM: Parry Klassen
Wayne Zipser
Michael Johnson

Re: Communication report on monitoring results for July and August 2004

On July 31, 2004 water collected at the ESJWQC monitoring site on the Merced River at Santa Fe was used to initiate the three species toxicity test. At the close of the acute *Ceriodaphnia* test, there was a statistically significant difference between the control and the sample. Survival of the *Ceriodaphnia* in the control was 95% and the survival in the sample was 75%. Because the survival was not below 50%, a TIE was not initiated. Water chemistry data did not detect any pesticides in the water. Due to confusion over the language in the Conditional Waiver and logistic problems with the laboratory, an additional sample was not collected to test for persistence.

On August 31, 2004 the second round of Coalition sampling took place. Toxicity testing of the sample collected at the Merced River at Santa Fe resulted in statistically significant differences between the control and the samples for *Ceriodaphnia* and *Pimephales promelas* (fathead minnow). Preliminary information received during a phone conversation from the laboratory indicated that the survival of *Ceriodaphnia* in the sample was 45% (compared to 95% in the control) and survival of the fathead minnow larvae was 65% (compared to 95% in the control). These numbers will be confirmed.

In response, a Phase I TIE for *Ceriodaphnia* was initiated on September 7, 2004, and a second sample is being collected from the site and tested to determine persistence. No TIE was initiated for the fathead minnow larvae because the 2 toxic unit trigger was not exceeded.

After the TIE or water chemistry data indicate a potential cause of toxicity, a search will be initiated for the source of the toxicity.

The ESJWQC will update the Regional Board as new information becomes available.

Communication report response to questions September 22, 2004

Shakoora,

I finally received information from the lab and can address your questions concerning the toxicity hit from the last two months.

1. As stated in the first paragraph, what type of water chemistry data did not detect any pesticides in the water sample collected on July 31st? Was this sample analyzed for pesticides? Did the water quality data show any other parameters that sample was analyzed for?

Yes, we analyzed the sample for a series of pesticides. The Excel spreadsheet with details of the tests and the laboratory results is attached as a separate attachment to the email. None of the analytes were detected in the sample from the site.

2. Was the initial toxicity in the sample collected on July 31st reported to the Regional Board?

The initial toxicity was not reported to the Board. As we discussed over the phone, there was some confusion over what constituted the need for a communication report. After receiving clarification from you, we notified the Board of the toxicity.

3. How long after initiating the test was the toxicity observed in sample collected on August 31st (withing 24 hours)? What is the laboratory procedure in terms of conducting TIE on toxic samples. Does the laboratory conduct TIE on the initial sample collected? How long after a sample shows toxicity does TIE start?

The level of toxicity observed in the *Ceriodaphnia* test was 75% survival in the sample from the Merced River at Santa Fe compared to 95% survival in the control. No toxicity was observed at 72 hours into the test, and toxicity was observed at 96 hours. The laboratory procedure is to conduct a Phase I TIE when the toxicity is at least two toxic units. In this case, the TIE trigger was not reached and no TIE was initiated. All TIEs will be performed on the original samples (see below). A TIE would be initiated immediately on reaching the TIE trigger of two toxic units, even if this trigger is reached prior to the end of the toxicity test.

4. You indicated that No TIE was initiated for the fathead minnow larvae. What type of TIE was initiated and when can we get the results of the Phase I TIE?

This question refers to the second toxic hit at the site for the sample collected August 31, 2004. At that time, the *Ceriodaphnia* toxicity time course was as follows:

24 hours: Control - 100% survival MRSFD - 100% survival	48 hours: Control - 100% survival MRSFD - 65% survival	72 hours: Control - 100% survival MRSFD - 40% survival	96 hours: Control - 95% survival MRSFD - 40% survival
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Based on these results, the site was re-sampled on September 7 and a TIE targeted toward pesticides was performed on the original sample. For the re-sample, there was 100% survival in both the Control and the new sample through 96 hours, indicating that there was no further toxicity present at the site. The results of the Phase I TIE on the original sample were:

Laboratory Control: 90% survival
 Centrifuge Blank: 55% survival (possible contamination issue)
 C-8 Solid Phase Extraction Blank: 100% survival
 PBO blank: 85% survival
 Baseline MRSFD sample: 95% survival
 Centrifuged MRSFD sample: 25% survival
 C-8 Solid Phase Extraction MRSFD sample: 100% survival
 PBO MRSFD: 100% survival

The results of this TIE indicate that the toxicity in the baseline sample was transient (*i.e.*, not persistent), and was not recovered during the TIE. As the standard turn-around-time is 28 days, I have yet to receive the pesticide analyses results for the sample that triggered the TIE.

East San Joaquin Water Quality Coalition

1201 L Street
Modesto, CA 95354
www.esjcoalition.org

November 24, 2004

William Croyle
Irrigated Lands Program
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive #200
Sacramento, CA 95670-6114

Dear Bill,

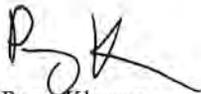
On November 4, we received the following email from Pacific EcoRisk, our contractor for water quality toxicity testing.

In reviewing the report for the ESJWQC toxicity testing results for the samples collected on September 29, I noted that the Duck Slough at Gurr Road (DSAGR) sample exhibited a slight (~27%), but statistically significant, reduction in algal cell density. None of the other samples were toxic with respect to algae cell density, Ceriodaphnia survival, or fathead minnow survival. As we have a very stringent results tracking program here at Pacific EcoRisk, I was disappointed that the slight reduction in algae cell density for this sample was not immediately brought to my attention. We have implemented some additional communication requirements to specific scientists to assure that this does not reoccur for all future testing.

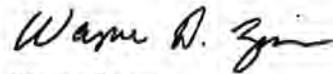
Please feel free to contact me should you have any questions.

We apologize for the late delivery of the communication report. Because the report from the lab was received over a month after the event, we were unable to retest for persistence. We have yet to receive the full report for the test or the water quality data and can not yet determine if there was a sufficient amount of any constituent to suggest the potential causative agent. As indicated in the email from the lab, steps are being taken to prevent a recurrence of the problem.

Let us know if further explanation or documentation is necessary.



Parry Klassen
559-325-9855



Wayne Zipser
209-522-7278

Transmittal letter

East San Joaquin Water Quality Coalition

1201 L Street
Modesto, CA 95354
www.esjcoalition.org

April 1, 2005

William Croyle
Irrigated Lands Program
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive #200
Sacramento, CA 95670-6114

Dear Bill,

During the 2004 irrigation season, sampling was conducted on three dates at four sites (each sampling date). Six sites were originally targeted for sampling but lack of water and access problems precluded two sites from being sampled. The following waiver violations were discovered during the 2004 irrigation season.

Event 1 (July 31, 2004)

One site, Merced River at Santa Fe Drive, exhibited significantly reduced survival of *Ceriodaphnia* compared to the laboratory controls. Survival of the *Ceriodaphnia* in the control was 95% and the survival in the sample was 75%. Because the survival was not below 50%, a TIE was not initiated. Water chemistry data did not detect any pesticides in the sample. Consequently, we are unable to identify the cause of the toxicity. Due to confusion over the language in the Conditional Waiver and logistic problems with the laboratory, an additional sample was not collected to test for persistence. A communication report was filed with the Regional Board on September 10, 2004.

Physical parameters were within the normal ranges for water with the exception of total dissolved solids at August Road Drain @ Crows Landing with a TDS measure of 1400mg/L and an *E. coli* measure³ of 1600 MPN/100ml at Dutchman's Creek @ Gurr Road, 350 MPN/100ml at Duck Slough at Gurr Road, and 300 MPN/100ml at August Road Drain @ Crows Landing. Electrical conductivity at August Road Drain @ Crows Landing exceeded the water quality objective (2082 µmhos/cm).

Event 2 (August 31, 2004)

One site, Merced River at Santa Fe Drive exhibited significant toxicity to *Ceriodaphnia* and a second sample was collected to determine if the toxicity was persistent. In addition, a Toxicity Identification Evaluation (TIE) was performed on the original sample to determine the cause of the toxicity. There was no toxicity observed in the follow-up sample indicating that the toxicity was not persistent. A retest of the original sample indicated that no toxicity was present. A TIE was also performed and results were inconclusive. Consequently, no cause could be assigned to the toxicity seen at the site. A communication report was submitted to the Regional Board on September 10, 2004.

Responses to questions from Regional Board staff were provided in late September when results of the laboratory analyses were available.

Physical parameters were within the normal ranges of water quality objectives except for a TDS of 700 mg/L at August Road Drain @ Crows Landing, and *E. coli* measures of 1600 MPN/100ml for Dutchman's Creek @ Gurr Road, and 300 MPN/100ml at August Road Drain @ Crows Landing. Electrical conductivity at August Road Drain @ Crows Landing exceeded the water quality objective (1093 µmhos/cm).

Event 3 (September 29, 2004)

Toxicity testing – Significantly reduced growth of algae was observed at Duck Slough. There was no toxicity to *Ceriodaphnia* or fathead minnows at any site. Algal TIEs were not performed. Due to a reporting error by the laboratory, no toxicity was noted and therefore no follow up sample was collected. A communication report was submitted to the Regional Board on November 6, 2004.

Laboratory pH of the sample from August Road Drain was 9.0, although the field data indicated that the pH of the sample was 8.26. TDS was found above the water quality objective at two sites; August Road Drain (700 mg/L), and Duck Slough (540 mg/L), and *E. coli* was found above the water quality objective at two sites; August Road Drain @ Crows Landing (240 MPN/100ml, and Dutchman's Creek at Gurr Road (500 MPN/100ml). Electrical conductivity at August Road Drain @ Crows Landing exceeded the water quality objective (1022 µmhos/cm).

Follow-up actions

After sampling indicated toxicity was present at the Merced River @ Santa Fe site on two occasions, the County Agricultural Commissioner and several local growers reported that because of easy access, the Merced River site is frequently used as a trash dump by local individuals and also serves as a dump-site for illegal production of methamphetamines. If we detect positive toxicity in future test results, the coalition will attempt to determine if the toxicity is a function of agricultural activities or dumping at the site. This will be accomplished by sampling at a site slightly upstream on private property where dumping could not occur. If the toxicity is a result of dumping at the Merced River at Santa Fe site, there should be no toxicity slightly upstream. If the toxicity is the result of upstream agricultural activities, we should observe the toxicity in both samples. If toxicity is sufficient to trigger a TIE, we will institute procedures to remove metals from the sample to determine if metals are the cause. The remaining TIE procedures will be followed as they were last year.

In addition to fine tuning the testing procedures to be followed next year, the ESJ Coalition is undertaking additional efforts to identify and eliminate sources of the toxicity or chemicals exceedances identified by monitoring. First, we have requested from County Agricultural Commissioners all of the Pesticide Use Reports for all watersheds in the Coalition region. We have separately requested the parcel level data from each county and those data are either available or forthcoming. Unfortunately, the PURs are

compiled based on a township-range-section system, while parcel data are simply given APNs. Matching the files of parcel level data with the PURs is a very slow process. Also, the PURs contain tens of thousands of lines of information, even for small windows of time, slowing the search process further. Finally, Merced County has requested that they provide the results for the 2004 Irrigation season and the 2005 Dormant season in a single database to reduce staff time and the drain on the resources of their office. We anticipate that we will receive the pesticide use data for the Merced River at Santa Fe watershed in early April. As we work through those data, we will update the Regional Board on our progress.

Because the cause of the toxicity is currently unknown for both the Merced River and the Duck Slough sites, the ESJ Coalition will take the following steps: 1) using 2004 PURs, identify and quantify the chemicals that could be potential sources of toxicity to *Ceriodaphnia* and *Selanastrum* (for the Merced River and Duck Slough sites respectively), 2) determine through testing if toxicity is present in 2005, 3) perform TIEs (if toxicity trigger is exceeded) to evaluate the potential causes of toxicity including metals, 4) increase the list of chemicals tested during water chemistry analyses to include those that could be causes of toxicity to the species, 5) obtain 2005 PURs for the watershed, and 6) use the results of the toxicity tests, TIEs (if performed), water chemistry, and PUR data on location of applications in a weight-of-evidence approach to identify cause(s) and potential source(s).

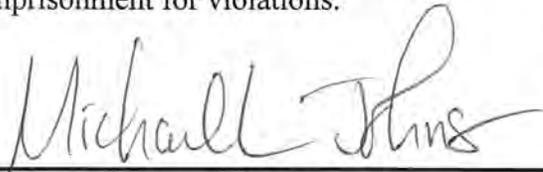
Despite the fact that the cause of toxicity from water sampling last summer was unknown, the ESJ Coalition initiated a series of outreach meetings in the Coalition region in March 2005. The meetings, located in Merced (3-9-05), Madera (3-22-05) and Modesto (3-24-05), provided growers and crop advisors with updates on the monitoring results outlined above. Also presented was information on Best Management Practices to protect water quality for row crops and orchards, including detailed descriptions of label changes for diazinon use as a dormant orchard spray. The goal of the meetings was to outline to growers and crop advisors the activities that the Coalition was responsible for performing as a follow up to monitoring of local waterways such as identification of sources and promotion of management measures to correct the problem. A total of 250 growers and crop advisors attended the three meetings.

Expanded sampling for Phase I and Phase II

Six sites were originally proposed for sampling during the irrigation season of 2004. Ash Slough remained dry throughout the year, and access problems stagnant water conditions eliminated Riley Slough from sampling. Following discussions with Regional Board staff, the sample sites were reexamined and an expanded set of sites were proposed for 2005. The proposed sites included core sites at which sampling would continue throughout the life of the monitoring program, and a series of rotating sites that would be sampled for two years.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified

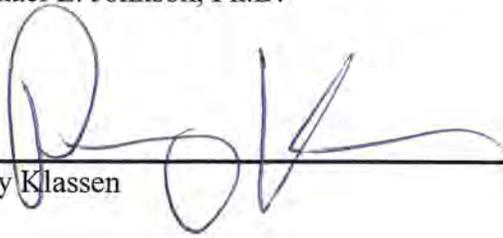
personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for knowingly submitting false information, including the possibility of fine and imprisonment for violations.



4-01-05

Michael L. Johnson, Ph.D.

Date



3-30-05

Parry Klassen

Date

Conclusions/Recommendations

All conclusions and recommendations are found in the text of the Annual Monitoring Report.

Appendix I. Raw Data

Raw data have not been delivered by the laboratory. They will be forwarded immediately on receipt.

Francisca Johnson
1815 Michelangelo Place
Davis, CA 95616

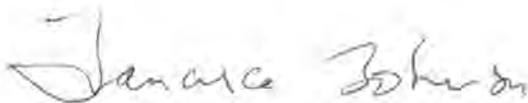
May 23, 2005

Ms. Diana Messina
California Regional Water Quality Control Board
11020 Sun Center Dr., Suite 200
Rancho Cordova, CA 95670

Dear Ms. Messina:

Please find enclosed the raw data for the ESJWQC Annual Monitoring Report
2005.

Sincerely,

A handwritten signature in cursive script that reads "Francisca Johnson".

Francisca Johnson

EPA METHOD 8081A
Organochlorine Pesticides

APPL, INC.

Grant 1

Data Validation Package
for

EPA METHOD 8081A
Organochlorine Pesticides

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**EPA METHOD 8081A
Organochlorine Pesticides
Case Narrative**

APPL, INC.



Case Narrative

ARF: 45039

Project:

State Certification Number: CA1312

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Sample Receipt Information:

The sample group was received August 2, 2004. The samples were assigned Analytical Request Form (ARF) number 45039. The sample numbers and requested analyses were compared to the chains of custody. No exception was noted.

Sample Table

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received
01-ARDCL-012	AP73362	WATER	7/31/04	8/2/04
01-MRSFD-018	AP73363	WATER	7/31/04	8/2/04
01-DSAGR-033	AP73364	WATER	7/31/04	8/2/04
01-DSAGR-034	AP73365	WATER	7/31/04	8/2/04
01-DSAGR-035	AP73366	WATER	7/31/04	8/2/04
01-DCAGR-041	AP73367	WATER	7/31/04	8/2/04
01-ARDCL-011	AP73369	WATER	7/31/04	8/2/04
01-MRSFD-017	AP73370	WATER	7/31/04	8/2/04
01-DSAGR-030	AP73371	WATER	7/31/04	8/2/04
01-DSAGR-031	AP73372	WATER	7/31/04	8/2/04
01-DSAGR-032	AP73373	WATER	7/31/04	8/2/04
01-DCAGR-040	AP73374	WATER	7/31/04	8/2/04

EPA Methods 8081A

Pyrethroids

Sample Preparation:

The water samples were extracted according to EPA method 3510C. All holding times were met.

Analysis Information:

Samples:

The samples were analyzed according to EPA method 8081A using a Hewlett Packard GC equipped with an ECD.

Calibrations:

Initial and continuing calibrations were performed according to the method. All acceptance criteria were met.

Blanks:

No target analyte was detected above the reporting limit for the method blanks.

Spikes and Duplicates:

Sample 01-DSAGR-032 was designated for Matrix Spike/Matrix Spike Duplicate analysis. A Laboratory Control Spike (LCS) was used for quality assurance. All spike recoveries met acceptance criteria.

Surrogates:

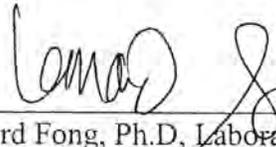
All surrogates recovered within acceptance limits.

Summary:

No analytical problems were encountered. All data are acceptable.

CERTIFICATION

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the hard copy has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

 4/26/05

Leonard Fong, Ph.D, Laboratory Director / Date

**EPA METHOD 8081A
Organochlorine Pesticides
Chain of Custody and ARF**

APPL, INC.

APPL - Analysis Request Form

45039

Client: Pacific EcoRisk
 Address: 835 Arnold Drive, Suite 104
Martinez, CA 94553
 Attn: Stephen Clark
 Phone: 925-313-8080 Fax: 925-313-8089
 Job: EAST SAN JOAQUIN RIVER WATERSHED
 PO #: NA
 Chain of Custody (Y/N): Y # _____
 RAD Screen (Y/N): Y pH (Y/N): N
 Turn Around Type: STD

Received by: CM 
 Date Received: 8/2/04 Time: 08:00
 Delivered by: HAND
 Shuttle Custody Seals (Y/N): N
 Chest Temp(s): 9°, 11° HB 66636
 Color: PINK
 Samples Chilled until Placed in Refrig/Freezer: Y
 Project Manager: ROBERT WISE R.W.
 QC Report Type: STD/EDD/CA
 Due Date: 8/14/04

Comments:

LOW LEVEL PESTICIDES
For the EPA 8321s, we need Low-Level RL's (0.1-3.5 ug/L)
See special reporting list from client.
Check with client for MS/MSD assign.
Report APPL Form 1's and screen for J-values to the MDL.

INVOICED

Sample Distribution: *8/10/04*
 GC: 6-\$84AG, 6-\$81PY
 Extractions: 6- SEP025, 6- SEP009

Charges: _____ Invoice To: _____

Client ID	APPL ID	Sampled	Analyses Requested
1. 01-ARDCL-012	AP73362W 	7/31/04 16:10	\$84AG
2. 01-MRSFD-018	AP73363W 	7/31/04 14:45	\$84AG
3. 01-DSAGR-033	AP73364W 	7/31/04 11:54	\$84AG
4. 01-DSAGR-034	AP73365W 	7/31/04 11:55	\$84AG
5. 01-DSAGR-035	MS/MSD AP73366W 	7/31/04 11:56	\$84AG
6. 01-DCAGR-041	AP73367W 	7/31/04 10:55	\$84AG
7. 01-ARDCL-011	X-SPK AP73369W 	7/31/04 16:09	\$81PY
8. 01-MRSFD-017	X-SPK AP73370W 	7/31/04 14:44	\$81PY
9. 01-DSAGR-030	X-SPK AP73371W 	7/31/04 11:51	\$81PY

Administrative Record

45039

APPL - Analysis Request Form

45039

10.01-DSAGR-031	X-SPK	AP73372W	7/31/04	11:52	\$81PY
01-DSAGR-032	SPK/MS/W:	AP73373W	7/31/04	11:53	\$81PY
12.01-DCAGR-040	X-SPK	AP73374W	7/31/04	10:54	\$81PY

INVOICE

initials _____ Date _____

APPL Sample Receipt Form

ARF# 45039

Sample	Container Type	Count
1362	17 Amber Liter	1
AP73363	17 Amber Liter	1
AP73364	17 Amber Liter	1
AP73365	17 Amber Liter	1
AP73366	17 Amber Liter	1
	26 Other	1
AP73367	17 Amber Liter	1
AP73369	17 Amber Liter	1
AP73370	17 Amber Liter	1
AP73371	17 Amber Liter	1
AP73372	17 Amber Liter	1
AP73373	17 Amber Liter	1
	26 Other	1
AP73374	17 Amber Liter	1

Sample Container Type Count Sample Container Type Count



Pacific EcoRisk

ENVIRONMENTAL CONSULTING & TESTING

835 Arnold Drive, Suite 104, Martinez, CA 94553
(925) 313-8080 FAX (925) 313-8089

APPL CHAIN-OF-CUSTODY RECORD

Client Name: Pacific EcoRisk
Client Address: 835 Arnold Drive, Suite 104
Martinez, CA 94553

Sampled By: *PEL*

Phone: (925) 313-8080
FAX: (925) 313-8089

Project Manager: Stephen Clark

Project Name: East San Joaquin River Watershed Coalition
PO Number:

Client Sample ID

Sample Date

Sample Time

Sample Matrix*

Number

Container Type

Correct Containers: Yes No

Sample Temperature: Ambient Cold Warm

Sample Preservative: Yes No

Turnaround Time: STD Specify:

Comments: *033 sc*
01-DSAGR-025 = Field Blank
01-DSAGR-026 = Field Duplicate
01-DSAGR-027 = For APPL Internal Matrix Spike/Matrix Duplicate (do not invoice)

REQUESTED ANALYSIS

EPA 1660 Mod (Pyrethroids: esfenvalerate, permethrin, cypermethrin, L-cyhalothrin)
EPA 8141a (Organophosphate: Diazinon, Chlorpyrifos)

RELIQUISHED BY

Signature: *Max Weiss*
Print: *Max Weiss*
Organization: *PEL*
DATE: *7/31/04*

RECEIVED BY

Signature: *[Signature]*
Print: *[Signature]*
Organization: *[Signature]*
DATE: *8/2/04* TIME: *0800*

*MATRIX CODES: (SED = Sediment); (FW = Freshwater); (MW = Wastewater); (STRMW = Stormwater)



Pacific EcoRisk

ENVIRONMENTAL CONSULTING & TESTING

835 Arnold Drive, Suite 104, Martinez, CA 94553
(925) 313-8080 FAX (925) 313-8089

APPL CHAIN-OF-CUSTODY RECORD

Client Name:		Pacific EcoRisk		REQUESTED ANALYSIS		
Client Address:		835 Arnold Drive, Suite 104 Martinez, CA 94553				
Sampled By:		PEN		EPA 1660 Mod (Pyrethroids: esfenvalerate, permethrin, cypermethrin, L-cyhalothrin)		
Phone:		(925) 313-8080		EPA 8141a (Organophosphate: Diazinon, Chlorpyrifos)		
FAX:		(925) 313-8089				
Project Manager:		Stephen Clark				
Project Name:		East San Joaquin River Watershed Coalition				
PO Number:						
Client Sample ID		Sample Date	Sample Time	Sample Matrix*	Number	Container Type
1	01-RSDFR-005	7/31/04	1609	FW	1	1-L amber
2	01-ARDCL-011	7/31/04	1444	FW	1	1-L amber
3	01-MRSFD-017	7/31/04	1151	FW	1	1-L amber
4	01-DSAGR-027	7/31/04	1152	FW	1	1-L amber
5	01-DSAGR-028	7/31/04	1153	FW	1	1-L amber
6	01-DSAGR-028	7/31/04	1054	FW	1	1-L amber
7	01-DCAGR-042	7/31/04		FW	1	1-L amber
8	01-ADATTA-045			FW	1	1-L amber
9						
10						
11						

Correct Containers: Yes No
Sample Temperature: Ambient Cold Warm
Sample Preservative: Yes No
Turnaround Time: STD Specify:

Comments: 030 = Field Blank
01-DSAGR-028 = Field Duplicate
031

Signature: *Michael McElroy*
Print: Michael McElroy
Organization: PEN
DATE: 7/31/04 TIME: 1622

Signature: *[Signature]*
Print: *[Signature]*
Organization: *[Signature]*
DATE: 8/2/04 TIME: 0800

RELINQUISHED BY

MATRIX CODES: (SED = Sediment); (FW = Freshwater); (WW = Wastewater); (STRMW = Stormwater)

COOLER RECEIPT FORM

Project: East San Joaquin River Watershed Date Received: 8-2-04 Number of Coolers: 1

1. Did cooler come with a shipping slip (air bill, etc.)? YES NO NA
If yes; enter carrier name Hand enter air bill numbers: 1) _____
2) _____ 3) _____
2. If cooler belongs to APPL, has it been logged into the ice chest database? YES NO NA
3. Were custody seals on outside of cooler? YES NO NA
4. How many? _____ Date on seal? _____ Name on seal? _____
5. Were custody seals unbroken and intact at the time of arrival? YES NO NA
6. Were samples screened for radioactivity? YES NO NA
7. Was a chain of custody received? YES NO NA
8. Were the custody papers filled out properly? YES NO NA
9. Were the custody papers signed in the appropriate places? YES NO NA
10. Was the project identifiable from custody papers? YES NO NA
11. Was a sufficient amount of holding time remaining to analyze the samples? YES NO NA
12. Is location where sample was taken listed on the COC? YES NO NA
13. If required, was enough ice used? Type of ice: Wet ice YES NO NA
14. Shuttle temp(s): 1) 9° 2) 11° 3) _____ Serial number of certified thermometer used: HB66636
15. Was a temperature blank included in the cooler? YES NO NA
16. Describe type of packing in cooler: Sample & wet ice
17. Were all containers sealed in separate bags? YES NO NA
18. Did all containers arrive unbroken and were labels in good condition? YES NO NA
19. Were all container labels complete (ID, date, time, signature, preservative, etc.)? YES NO NA
20. Did all container labels agree with custody papers? YES NO NA
21. Were correct containers used for the tests indicated? YES NO NA
22. Were correct preservatives added to the samples? YES NO NA
23. Was a sufficient amount of sample sent for tests indicated? YES NO NA
24. Were bubbles present in volatile samples? YES NO NA

If yes, list by sample ID. The following VOAs were received with air bubbles:

Larger than a pea: _____

Smaller than a pea: _____

Signature of personnel receiving samples: Chris Sue Alt

Second reviewer: _____

Comments: _____

Name of project manager notified _____ Date and Time of notification _____

Name of client notified _____ Date and Time of notification _____

Information given to client _____ By whom (Initials): _____

**EPA METHOD 8081A
Organochlorine Pesticides
QC Summary**

APPL, INC.

Method Blank
EPA 8081A Pyrethroids WATER

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Blank Name/QCG: 040804W-73373 - 78222
Batch ID: \$81PY-040804A

Sample Type	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
BLANK	Cypermethrin	Not detected	0.10	ug/L	8/4/04	8/5/04
BLANK	Esfenvalerate/Fenvalerate	Not detected	0.02	ug/L	8/4/04	8/5/04
BLANK	Lambda cyhalothrin	Not detected	0.02	ug/L	8/4/04	8/5/04
BLANK	Permethrin	Not detected	0.02	ug/L	8/4/04	8/5/04
BLANK	Surrogate: DECA	64.7	25-143	%	8/4/04	8/5/04
BLANK	Surrogate: TCmX	35.3	25-144	%	8/4/04	8/5/04

Run #: 59
Instrument: LUCY
Sequence: 040804
Initials: SA

Organochlorine Pesticides Analysis by
EPA Method 608/8081

Form 2 & 8

Surrogate Recovery - Retention Time Summary

Lab Name: APPL, Inc.
Case No: 45039
Matrix: Water

SDG No: 45039
Date Analyzed: 8/5/04
Instrument: Lucy

Client Sample No.	APPL ID.	Surrogate Recovery - Retention Time			
		TCMX #2		DECA #2	
		%	RT	%	RT
1	Blank	35.3	3.80	64.7	11.26
2	Lab Control Spike	37.7	3.81	75.0	11.26
3	01-DSAGR-032 MS	56.5	3.80	70.3	11.26
4	01-DSAGR-032 MSD	49.8	3.81	69.2	11.26
5	01-ARDCL-011	50.7	3.80	66.0	11.26
6	01-MRSFD-017	50.9	3.80	69.2	11.26
7	01-DSAGR-030	48.5	3.81	67.6	11.26
8	01-DSAGR-031	40.3	3.80	61.0	11.26
9	01-DSAGR-032	48.8	3.81	62.9	11.26
10	01-DCAGR-040	45.8	3.80	60.6	11.26
11					
12					
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Laboratory Control Spike Recovery EPA 8081A Pyrethroids WATER

APPL ID: 040804W-73373 LCS - 78222

Batch ID: S81PY-040804A

APPL Inc.

4203 West Swift Avenue

Fresno, CA 93722

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
Cypermethrin	1.00	0.945	94.5	65-135
Esfenvalerate/Fenvalerate	0.200	0.189	94.5	65-135
Lambda cyhalothrin	0.200	0.181	90.5	65-135
Permethrin	0.200	0.187	93.5	65-135
Surrogate: DECA	0.300	0.225	75.0	25-143
Surrogate: TCmX	0.300	0.113	37.7	25-144

Comments:

Primary	SPK
Extraction Date :	8/4/04
Analysis Date :	8/5/04
Instrument :	LUCY
Run :	60
Initials :	SA

Printed: 4/7/05 1:40:51 PM

APPL Standard LCS

Matrix Spike Recoveries

EPA 8081A Pyrethroids WATER

APPL ID: 040804W-73373 MS - 78222
 Batch ID: S81PY-040804A
 Sample ID: AP73373

APPL Inc.
 4203 West Swift Avenue
 Fresno, CA 93722

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
Cypermethrin	2.00	ND	1.80	1.72	90.0	86.0	65-135	4.5	25
Esfenvalerate/Fenvalerate	0.400	ND	0.365	0.348	91.2	87.0	65-135	4.8	25
Lambda cyhalothrin	0.400	ND	0.358	0.338	89.5	84.5	65-135	5.7	25
Permethrin	0.400	ND	0.376	0.474	94.0	118	65-135	23.1	25
Surrogate: DECA	0.600	NA	0.422	0.415	70.3	69.2	25-143		
Surrogate: TCmX	0.600	NA	0.339	0.299	56.5	49.8	25-144		

Comments:

<u>Primary</u>	<u>SPK</u>	<u>DUP</u>
Extraction Date :	8/4/04	8/4/04
Analysis Date :	8/5/04	8/5/04
Instrument :	LUCY	LUCY
Run :	61	62
Initials :	SA	

Organochlorine Pesticides Analysis by
EPA Method 608/8081

Form 4
Blank Summary

Lab Name: APPL Inc.
Case No: 45039
Matrix: Water
Blank ID: 040804A BLK

SDG No: 45039
Date Analyzed: 8/5/04
Instrument: Lucy
Time Analyzed: 17:04

Client Sample No.	APPL ID.	File ID.	Date Analyzed	
1	Blank	040804A BLK 2/1000	0804059.D	8/5/04 5:04 PM
2	Lab Control Spike	040804A LCS-1 2/1000	0804060.D	8/5/04 5:18 PM
3	01-DSAGR-032 MS	AP73373W02 MS 2/500	0804061.D	8/5/04 5:33 PM
4	01-DSAGR-032 MSD	AP73373W02 MSD 2/500	0804062.D	8/5/04 5:48 PM
5	01-ARDCL-011	AP73369W01 2/1040	0804063.D	8/5/04 6:02 PM
6	01-MRSFD-017	AP73370W01 2/1050	0804064.D	8/5/04 6:17 PM
7	01-DSAGR-030	AP73371W01 2/1050	0804065.D	8/5/04 6:32 PM
8	01-DSAGR-031	AP73372W01 2/1050	0804066.D	8/5/04 6:47 PM
9	01-DSAGR-032	AP73373W01 2/1050	0804067.D	8/5/04 7:01 PM
10	01-DCAGR-040	AP73374W01 2/1050	0804068.D	8/5/04 7:16 PM
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**EPA METHOD 8081A
Organochlorine Pesticides
Sample Data**

APPL, INC.

EPA 8081A Pyrethroids WATER

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

Attn: Stephen Clark

Project: EAST SAN JOAQUIN RIVER WATERSHED COALIT

Sample ID: 01-ARDCL-011

Sample Collection Date: 7/31/04

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

ARF: 45039

APPL ID: AP73369

QCG: \$81PY-040804A-78222

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8081A	Cypermethrin	Not detected	0.10	ug/L	8/4/04	8/5/04
EPA 8081A	Esfenvalerate/Fenvalerate	Not detected	0.02	ug/L	8/4/04	8/5/04
EPA 8081A	Lambda cyhalothrin	Not detected	0.02	ug/L	8/4/04	8/5/04
EPA 8081A	Permethrin	Not detected	0.02	ug/L	8/4/04	8/5/04
EPA 8081A	Surrogate: DECA	66.0	25-143	%	8/4/04	8/5/04
EPA 8081A	Surrogate: TCmX	50.7	25-144	%	8/4/04	8/5/04

Run #: 63
Instrument: LUCY
Sequence: 040804
Dilution Factor: 1
Initials: SA

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804063.D\ECD1A.CH Vial: 63
 Signal #2 : G:\LUCY\DATA\040804\0804063.D\ECD2B.CH
 Acq On : 8-5-04 18:02:59 Operator: SA
 Sample : AP73369W01 2/1040 Inst : Lucy
 Misc : WATER Multiplr: 1.92
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 18:33 2004 Quant Results File: OCL.RES

Quant Method : G:\LUCY\DATA\040804\OCL.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 11:03:57 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2
System Monitoring Compounds						
1) S TCMX	3.00	3.80	8866920	9238346	0.1412	0.1462
Surrogate Spike	0.288	Range 25 - 150	Recovery =		48.95%	50.68%
22) S DBC	7.15	8.41	7594367	6539066	0.1939	0.1834
Surrogate Spike 0.288			Recovery =		67.22%	63.58%
23) S DECA	9.63	11.26	5781792	5237224	0.1862	0.1903
Surrogate Spike	0.288	Range 25 - 150	Recovery =		64.55%	65.97%
Target Compounds						
2) TM A-BHC	3.61	4.26	507628	3476794	0.0062	0.0416 #
3) TM B-BHC	4.23	4.88f	292558	380003	0.0096	0.0123 #
4) M G-BHC (LINDANE)	4.01	4.60	2725149	335332	0.0361	0.0045 #
5) TM D-BHC	4.51	5.11	125334	200532	0.0016	0.0026 #
6) M HEPTACHLOR	4.35	5.23	117929	766244	0.0017	0.0111 #
7) M ALDRIN	4.70f	5.55	13986929	305547	0.2193	0.0047 #
8) TM HEPTACHLOR EPOXI	5.19	6.02f	143819	115025	0.0023	0.0019 #
9) TM G-CHLORDANE	5.42	6.31	147369	13400665	0.0024	0.2300 #
10) TM A-ENDOSULFAN	5.61	6.42	367843	186001	0.0070	0.0037 #
11) TM A-CHLORDANE	5.53	6.31f	296066	13400665	0.0050	0.2364 #
12) TM P, P-DDE	5.71	6.51	2504404	87021	0.0408	0.0015 #
13) M DIELDRIN	5.87	6.74	75641	123934	0.0012	0.0022 #
14) M ENDRIN	6.19	7.00	228415	340353	0.0046	N.D. #
15) TM B-ENDOSULFAN	6.49	7.27f	383172	103020	0.0073	0.0024 #
16) TM P, P-DDD	6.29	7.09	683521	274970	0.0135	0.0058 #
17) TM ENDRIN ALDEHYDE	6.72	0.00	95798	0	0.0025	N.D. #
18) M P, P-DDT	6.58	7.57f	686416	10842062	0.0136	0.2415 #
19) TM ENDOSULFAN SULFA	0.00	7.88	0	108537	N.D.	0.0028 #
20) TM ENDRIN KETONE	7.83f	0.00	8066355	0	0.1661	N.D. #
21) TM METHOXYCHLOR	7.42	8.17	605193	272709	0.0253	0.0116 #

NT
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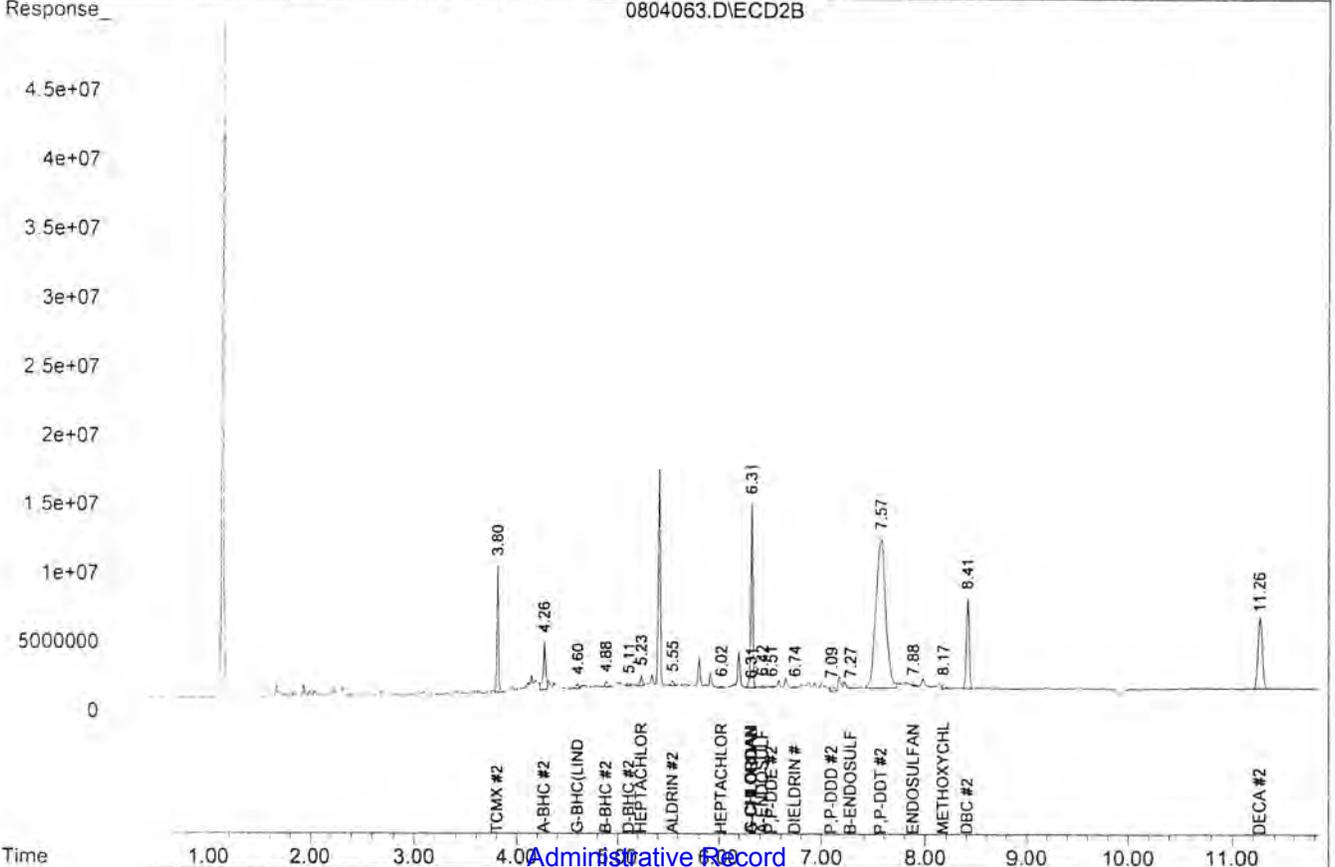
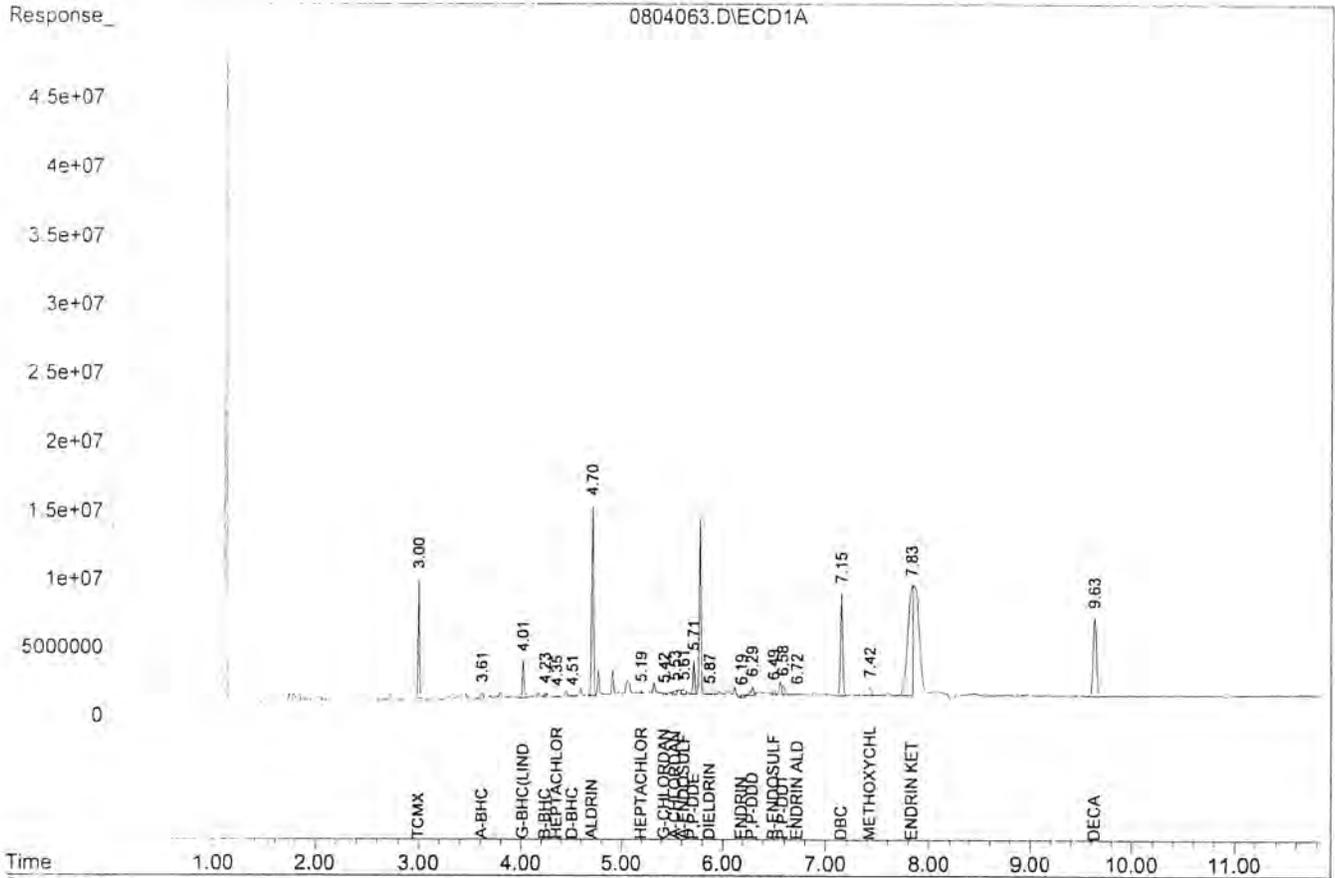
Target Compounds

Quantitation Report

(Not Reviewed)

Data File : G:\LUCY\DATA\040804\0804063.D
Acq On : 8-5-04 18:02:59
Sample : AP73369W01 2/1040
Misc : WATER
Quant Method : G:\LUCY\DATA\040804\OCL.M

Vial: 63
Operator: SA
Inst : Lucy
Multiplier: 1.92



Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804063.D\ECD1A.CH Vial: 63
 Signal #2 : G:\LUCY\DATA\040804\0804063.D\ECD2B.CH
 Acq On : 8-5-04 18:02:59 Operator: SA
 Sample : AP73369W01 2/1040 Inst : Lucy
 Misc : WATER Multiplr: 1.92
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 18:42 2004 Quant Results File: PPTH.RES

Quant Method : G:\LUCY\DATA\040804\PPTH.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 16:39:19 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

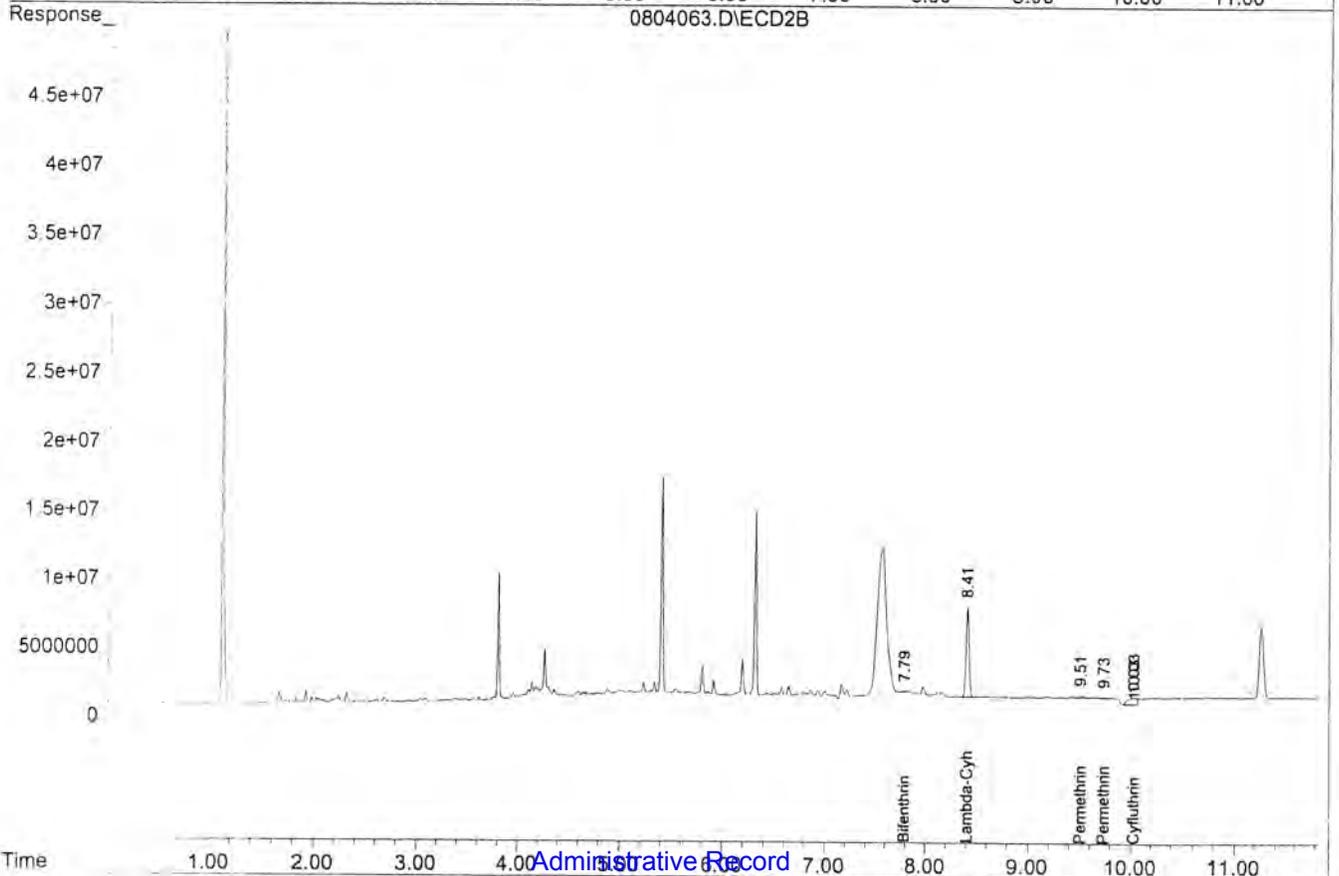
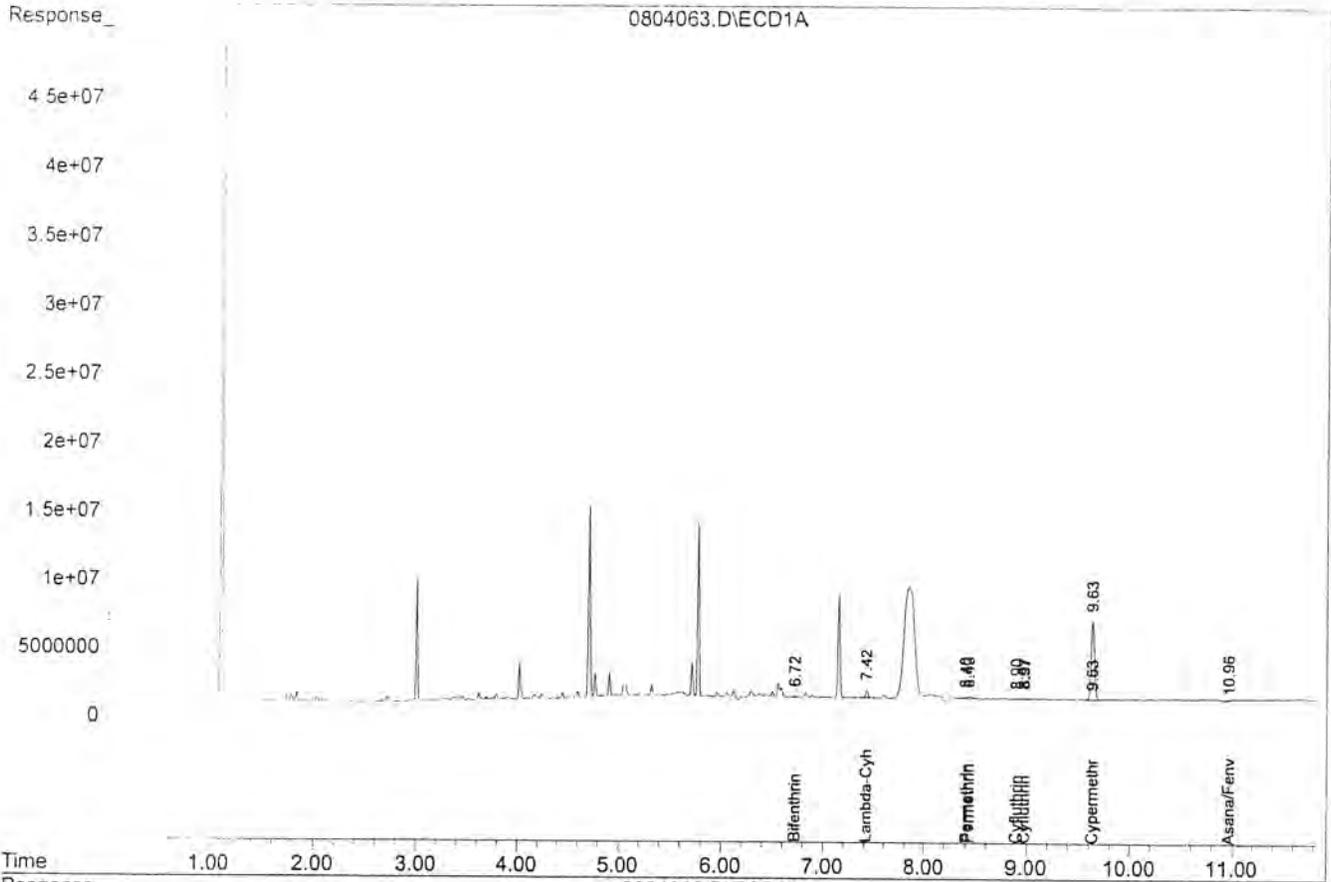
Compound	RT#1	RT#2	Resp#1	Resp#2	t#1	t#2
Target Compounds						
1) Bifenthrin	6.72	7.79	95798	64323	0.0067	0.0047 #
2) Lambda-Cyhalothr	7.42	8.41 ^f	605193	6539066	0.0217	0.2553 #
3) Permethrin 1	8.40	9.51	109627	152865	0.0341	0.0507 #
4) Permethrin 2	8.43 ^(P)	9.73 ^(P)	140319	65112	0.0615	0.0316 #
5) Cyfluthrin 1	8.90	10.03 ^(P)	55028	459809	0.0114	0.1069 #
6) Cyfluthrin 2	8.97	10.03	142725	459809	0.0221	0.0781 #
7) Cyfluthrin 3	8.97	0.00	142725	0	0.0177	N.D. #
9) Cypermethrin 2	9.63	0.00	5781792	0	1.4131	N.D. #
10) Cypermethrin 3	9.63	0.00	5781792	0	1.1245	N.D. #
12) Asana/Fenvalerat	10.96f	0.00	81713	0	0.0043	N.D. #
Target Compounds						
8) Cypermethrin 1	0.00	0.00	0	0	N.D.	N.D.
11) Asana/Fenvalerat	0.00	0.00	0	0	N.D.	N.D.

(ND)

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\040804\0804063.D
Acq On : 8-5-04 18:02:59
Sample : AP73369W01 2/1040
Misc : WATER
Quant Method : G:\LUCY\DATA\040804\PRTH.M

Vial: 63
Operator: SA
Inst : Lucy
Multiplr: 1.92



EPA 8081A Pyrethroids WATER

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark

Project: EAST SAN JOAQUIN RIVER WATERSHED COALIT

ARF: 45039

Sample ID: 01-MRSFD-017

APPL ID: AP73370

Sample Collection Date: 7/31/04

QCG: \$81PY-040804A-78222

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8081A	Cypermethrin	Not detected	0.10	ug/L	8/4/04	8/5/04
EPA 8081A	Esfenvalerate/Fenvalerate	Not detected	0.02	ug/L	8/4/04	8/5/04
EPA 8081A	Lambda cyhalothrin	Not detected	0.02	ug/L	8/4/04	8/5/04
EPA 8081A	Permethrin	Not detected	0.02	ug/L	8/4/04	8/5/04
EPA 8081A	Surrogate: DECA	69.2	25-143	%	8/4/04	8/5/04
EPA 8081A	Surrogate: TCmX	50.9	25-144	%	8/4/04	8/5/04

Run #: 64
Instrument: LUCY
Sequence: 040804
Dilution Factor: 1
Initials: SA

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804064.D\ECD1A.CH Vial: 64
 Signal #2 : G:\LUCY\DATA\040804\0804064.D\ECD2B.CH
 Acq On : 8-5-04 18:17:40 Operator: SA
 Sample : AP73370W01 2/1050 Inst : Lucy
 Misc : WATER Multiplr: 1.90
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 18:33 2004 Quant Results File: OCL.RES

Quant Method : G:\LUCY\DATA\040804\OCL.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 11:03:57 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

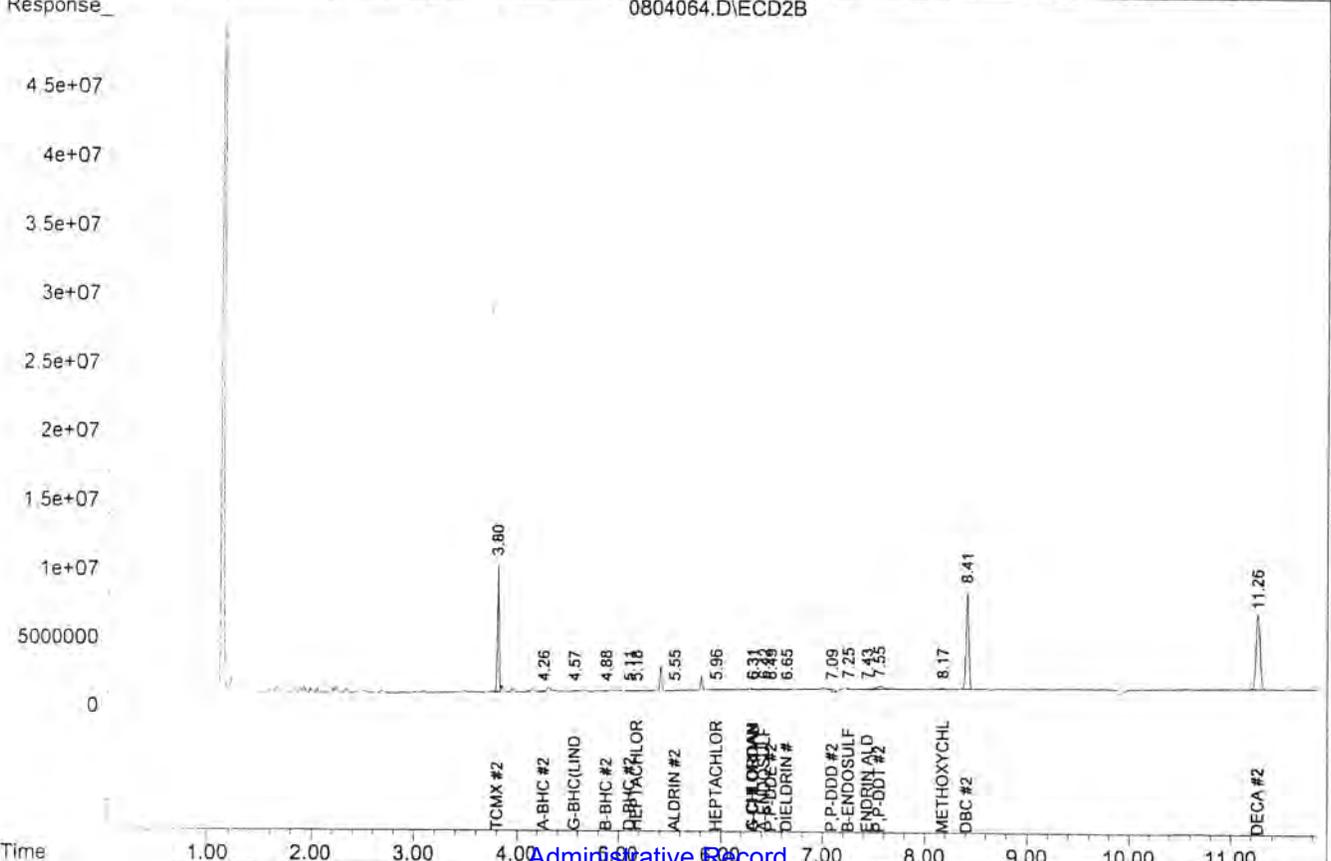
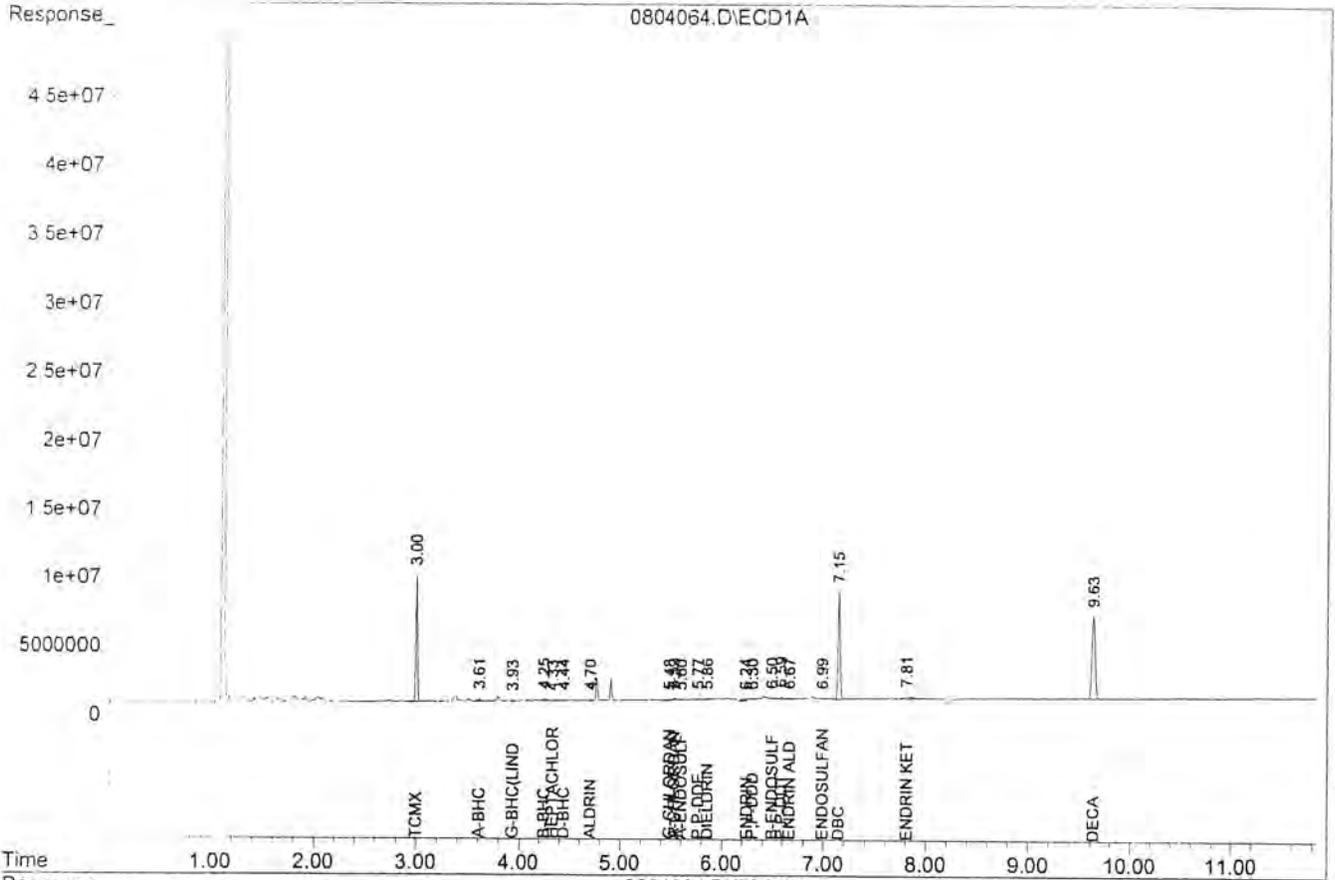
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2
System Monitoring Compounds						
1) S TCMX	3.00	3.80	9226819	9267636	0.1455	0.1453
Surrogate Spike	0.286	Range	25 - 150	Recovery =	50.93%	50.86%
22) S DBC	7.15	8.41	7816624	7052543	0.1977	0.1960
Surrogate Spike	0.286			Recovery =	69.19%	68.60%
23) S DECA	9.63	11.26	6008968	5495815	0.1917	0.1978
Surrogate Spike	0.286	Range	25 - 150	Recovery =	67.10%	69.23%
Target Compounds						
2) TM A-BHC	3.61	4.26	184932	80649	0.0022	0.0010 #
3) TM B-BHC	4.25f	4.88f	169793	66319	0.0055	0.0021 #
4) M G-BHC (LINDANE)	3.93f	4.57	48690	62616	0.0006	0.0008 #
TM D-BHC	4.44f	5.11	72056	30291	0.0009	0.0004 #
M HEPTACHLOR	4.33	5.18	18302	33412	0.0003	0.0005 #
7) M ALDRIN	4.70f	5.55	52728	39429	0.0008	0.0006 #
8) TM HEPTACHLOR EPOXI	0.00	5.96	0	40350	N.D.	0.0006 #
9) TM G-CHLORDANE	5.48f	6.31	80599	78930	0.0013	0.0013 #
10) TM A-ENDOSULFAN	5.60	6.42	28985	75182	0.0005	0.0015 #
11) TM A-CHLORDANE	5.53	6.31f	120521	78930	0.0020	0.0014 #
12) TM P,P-DDE	5.77f	6.49	52550	42949	0.0008	0.0007 #
13) M DIELDRIN	5.86	6.65f	64309	23285	0.0010	0.0004 #
15) TM B-ENDOSULFAN	6.50	7.25f	53205	103219	0.0010	0.0024 #
16) TM P,P-DDD	6.30	7.09	16701	198921	0.0003	0.0042 #
17) TM ENDRIN ALDEHYDE	6.67f	7.43	47725	52358	0.0012	0.0015 #
18) M P,P-DDT	6.59	7.55	144635	194751	0.0028	0.0043 #
19) TM ENDOSULFAN SULFA	6.99	0.00	16470	0	0.0004	N.D. #
20) TM ENDRIN KETONE	7.81f	0.00	169465	0	0.0035	N.D. #
21) TM METHOXYCHLOR	0.00	8.17	0	100049	N.D.	0.0042 #
Target Compounds						
14) M ENDRIN	6.24f	7.00	143699	98613	0.0029	N.D. #

NT



Data File : G:\LUCY\DATA\040804\0804064.D
Acq On : 8-5-04 18:17:40
Sample : AP73370W01 2/1050
Misc : WATER
Quant Method : G:\LUCY\DATA\040804\OCL.M

Vial: 64
Operator: SA
Inst : Lucy
Multiplr: 1.90



Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804064.D\ECD1A.CH Vial: 64
 Signal #2 : G:\LUCY\DATA\040804\0804064.D\ECD2B.CH
 Acq On : 8-5-04 18:17:40 Operator: SA
 Sample : AP73370W01 2/1050 Inst : Lucy
 Misc : WATER Multiplr: 1.90
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 18:42 2004 Quant Results File: PPTH.RES

Quant Method : G:\LUCY\DATA\040804\PPTH.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 16:39:19 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

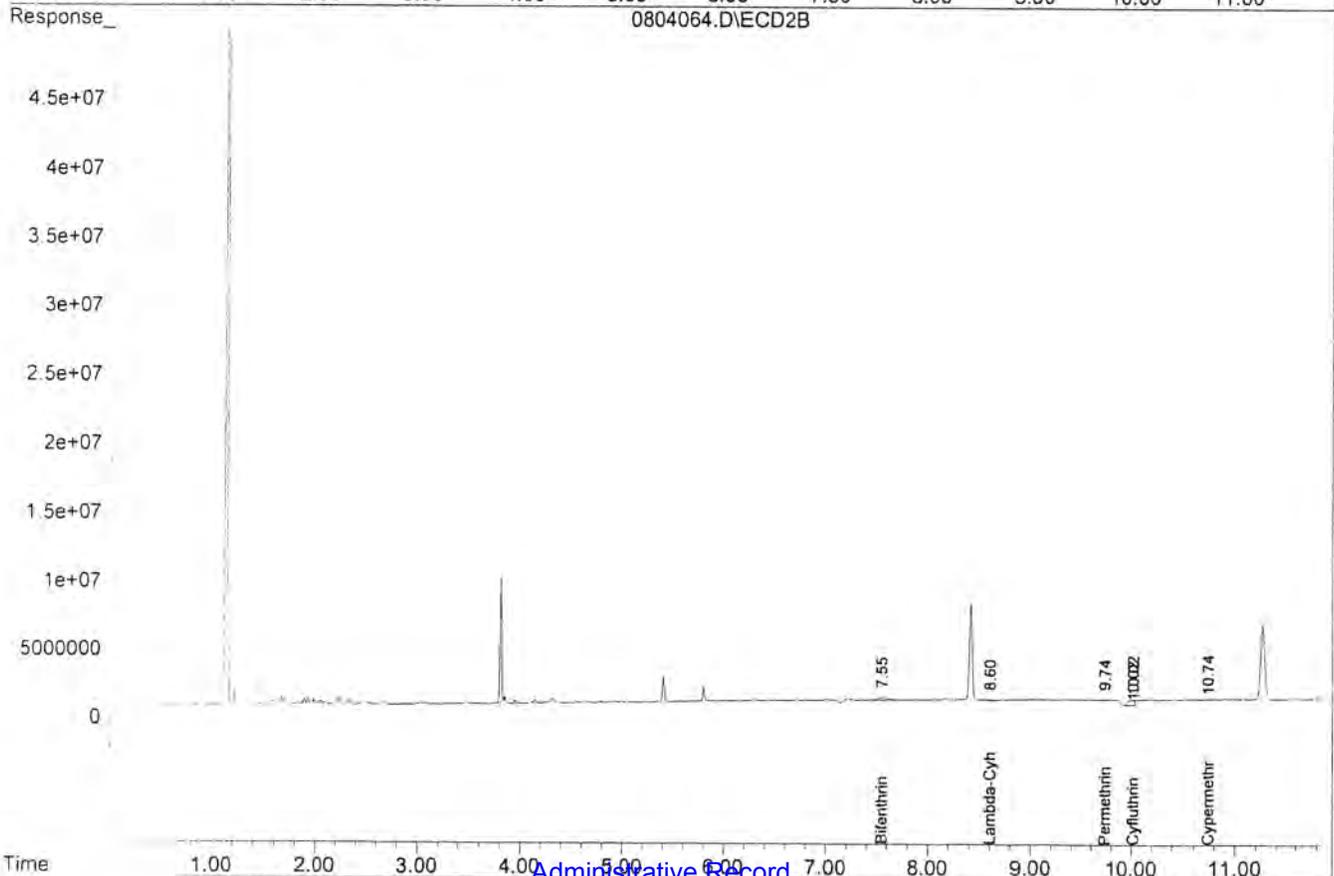
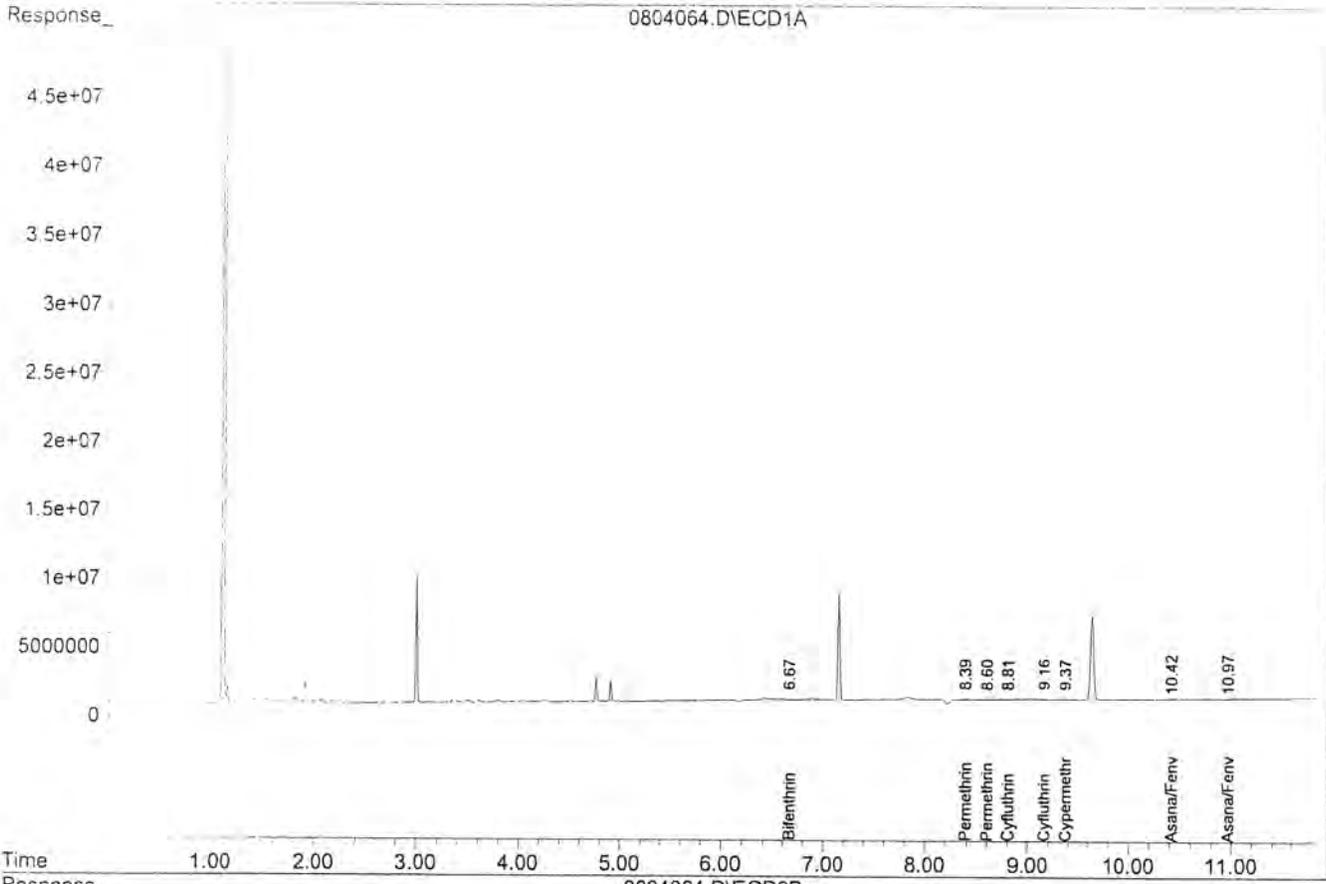
Compound	RT#1	RT#2	Resp#1	Resp#2	t#1	t#2
Target Compounds						
1) Bifenthrin	6.67	7.55	47725	194751	0.0033	0.0141 #
2) Lambda-Cyhalothr	0.00	8.60	0	59364	N.D.	0.0023 #
3) Permethrin 1	8.39	9.74	31605	18689	0.0097	0.0061 #
4) Permethrin 2	8.60	9.74	13294	18689	0.0058	0.0090 #
5) Cyfluthrin 1	8.81	10.02	12051	392170	0.0025	0.0903 #
6) Cyfluthrin 2	8.81	10.02	12051	392170	0.0018	0.0660 #
7) Cyfluthrin 3	9.16	0.00	20720	0	0.0025	N.D. #
8) Cypermethrin 1	9.37	10.74	13062	20050	0.0028	0.0048 #
9) Cypermethrin 2	9.37	10.74	13062	20050	0.0032	0.0055 #
10) Cypermethrin 3	9.37	10.74	13062	20050	0.0025	0.0056 #
11) Asana/Fenvalerat	10.42	0.00	19464	0	0.0016	N.D. #
Asana/Fenvalerat	10.97f	0.00	32153	0	0.0017	N.D. #

Target Compounds

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\040804\0804064.D
Acq On : 8-5-04 18:17:40
Sample : AP73370W01 2/1050
Misc : WATER
Quant Method : G:\LUCY\DATA\040804\PRTH.M

Vial: 64
Operator: SA
Inst : Lucy
Multiplr: 1.90



Administrative Record
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EPA 8081A Pyrethroids WATER

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark

Project: EAST SAN JOAQUIN RIVER WATERSHED COALIT

ARF: 45039

Sample ID: 01-DSAGR-030

APPL ID: AP73371

Sample Collection Date: 7/31/04

QCG: \$81PY-040804A-78222

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8081A	Cypermethrin	Not detected	0.10	ug/L	8/4/04	8/5/04
EPA 8081A	Esfenvalerate/Fenvalerate	Not detected	0.02	ug/L	8/4/04	8/5/04
EPA 8081A	Lambda cyhalothrin	Not detected	0.02	ug/L	8/4/04	8/5/04
EPA 8081A	Permethrin	Not detected	0.02	ug/L	8/4/04	8/5/04
EPA 8081A	Surrogate: DECA	67.6	25-143	%	8/4/04	8/5/04
EPA 8081A	Surrogate: TCmX	48.5	25-144	%	8/4/04	8/5/04

Run #: 65
Instrument: LUCY
Sequence: 040804
Dilution Factor: 1
Initials: SA

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804065.D\ECD1A.CH Vial: 65
 Signal #2 : G:\LUCY\DATA\040804\0804065.D\ECD2B.CH
 Acq On : 8-5-04 18:32:20 Operator: SA
 Sample : AP73371W01 2/1050 Inst : Lucy
 Misc : WATER Multiplr: 1.90
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 19:01 2004 Quant Results File: OCL.RES

Quant Method : G:\LUCY\DATA\040804\OCL.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 11:03:57 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

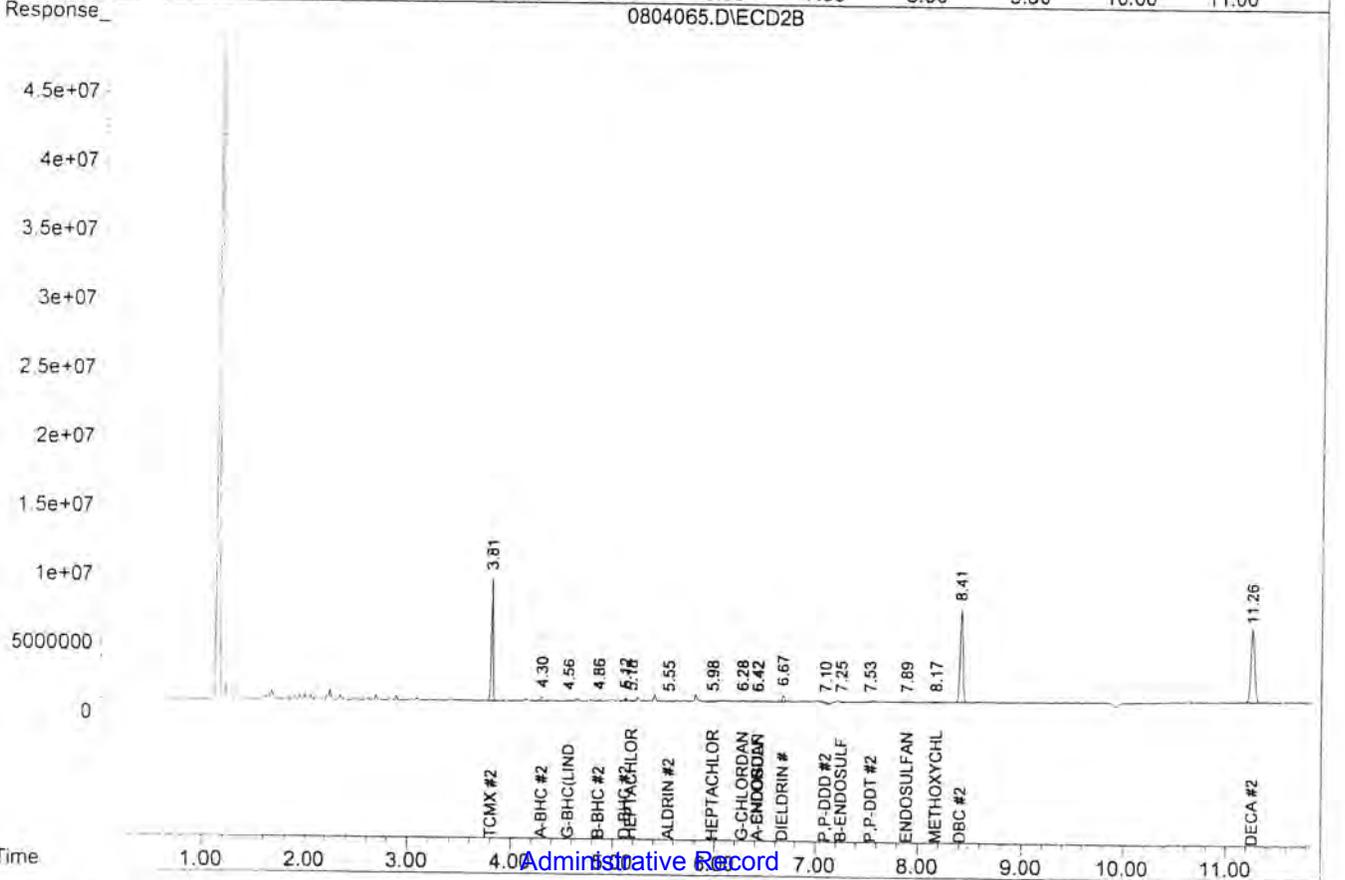
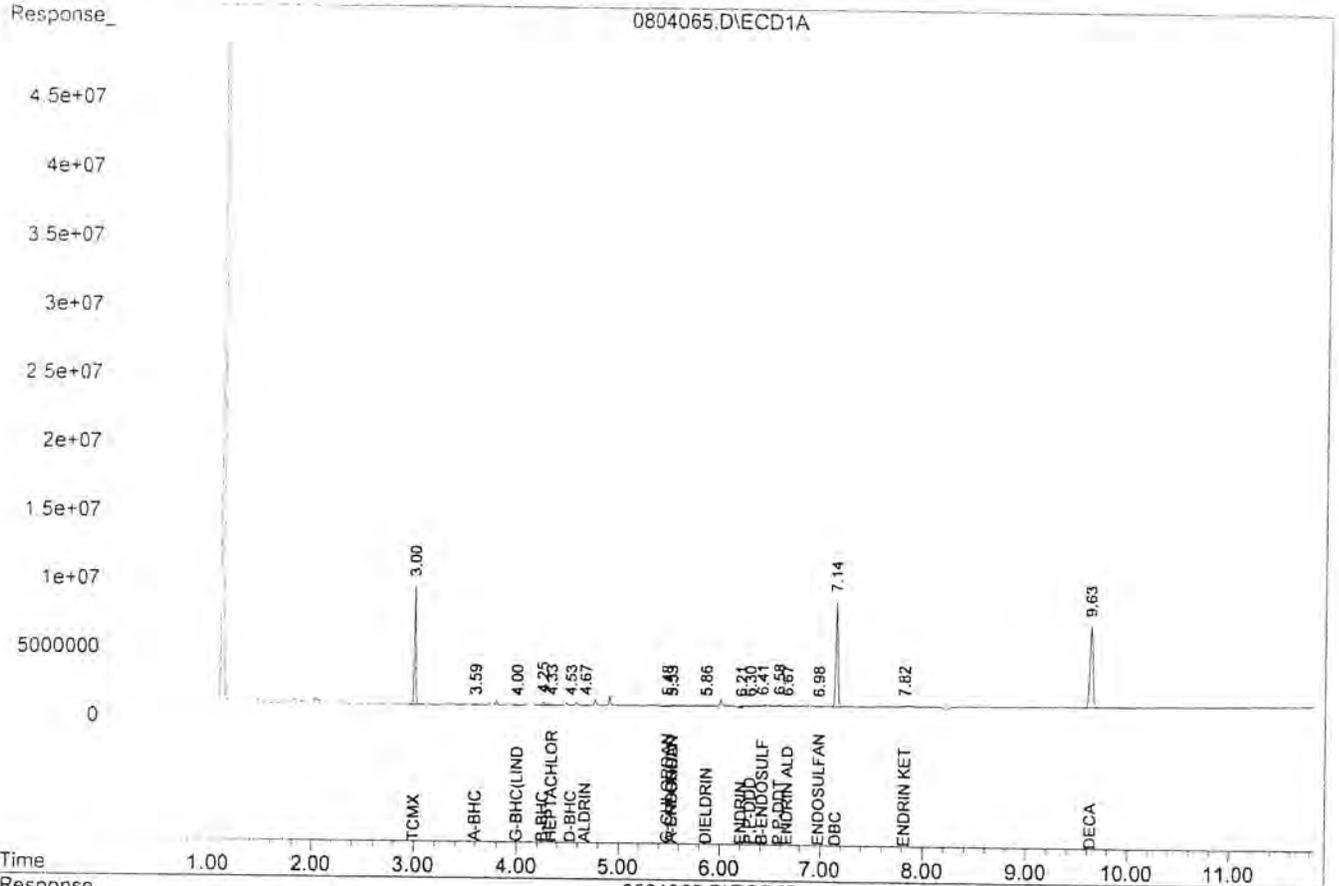
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2
System Monitoring Compounds						
1) S TCMX	3.00	3.81	8668415	8840183	0.1367	0.1386
Surrogate Spike	0.286	Range	25 - 150	Recovery =	47.85%	48.51%
22) S DBC	7.14	8.41	7683806	6713610	0.1943	0.1865
Surrogate Spike	0.286			Recovery =	68.01%	65.28%
23) S DECA	9.63	11.26	5939128	5367818	0.1894	0.1932
Surrogate Spike	0.286	Range	25 - 150	Recovery =	66.29%	67.62%
Target Compounds						
2) TM A-BHC	3.59	4.30f	50308	300512	0.0006	0.0036 #
3) TM B-BHC	4.25f	4.86	215429	150315	0.0070	0.0048 #
4) M G-BHC (LINDANE)	4.00	4.56	33083	118016	0.0004	0.0016 #
TM D-BHC	4.53	5.12	38162	208860	0.0005	0.0027 #
6) M HEPTACHLOR	4.33	5.18	47193	43590	0.0007	0.0006
7) M ALDRIN	4.67	5.55	86966	17088	0.0014	0.0003 #
8) TM HEPTACHLOR EPOXI	0.00	5.98	0	85745	N.D.	0.0014 #
9) TM G-CHLORDANE	5.48f	6.28	80866	59364	0.0013	0.0010
10) TM A-ENDOSULFAN	5.53f	6.42	51093	43615	0.0010	0.0009
11) TM A-CHLORDANE	5.53	6.42f	51093	43615	0.0009	0.0008
13) M DIELDRIN	5.86	6.67	52363	462561	0.0008	0.0081 #
15) TM B-ENDOSULFAN	6.41f	7.25f	128442	46055	0.0024	0.0011 #
16) TM P,P-DDD	6.30	7.10	23969	146866	0.0005	0.0031 #
17) TM ENDRIN ALDEHYDE	6.67f	0.00	57002	0	0.0015	N.D. #
18) M P,P-DDT	6.58	7.53	140677	66504	0.0028	0.0015 #
19) TM ENDOSULFAN SULFA	6.98	7.89f	10156	22979	0.0002	0.0006 #
20) TM ENDRIN KETONE	7.82f	0.00	62807	0	0.0013	N.D. #
21) TM METHOXYCHLOR	0.00	8.17	0	93268	N.D.	0.0039 #
Target Compounds						
12) TM P,P-DDE	0.00	0.00	0	0	N.D.	N.D.
14) M ENDRIN	6.21	7.00	118539	85451	0.0024	N.D. #

Quantitation Report

(Not Reviewed)

Data File : G:\LUCY\DATA\040804\0804065.D
Acq On : 8-5-04 18:32:20
Sample : AP73371W01 2/1050
Misc : WATER
Quant Method : G:\LUCY\DATA\040804\OCL.M

Vial: 65
Operator: SA
Inst : Lucy
Multiplr: 1.90



Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804065.D\ECD1A.CH Vial: 65
 Signal #2 : G:\LUCY\DATA\040804\0804065.D\ECD2B.CH
 Acq On : 8-5-04 18:32:20 Operator: SA
 Sample : AP73371W01 2/1050 Inst : Lucy
 Misc : WATER Multiplr: 1.90
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 19:02 2004 Quant Results File: PPTH.RES

Quant Method : G:\LUCY\DATA\040804\PPTH.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 16:39:19 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

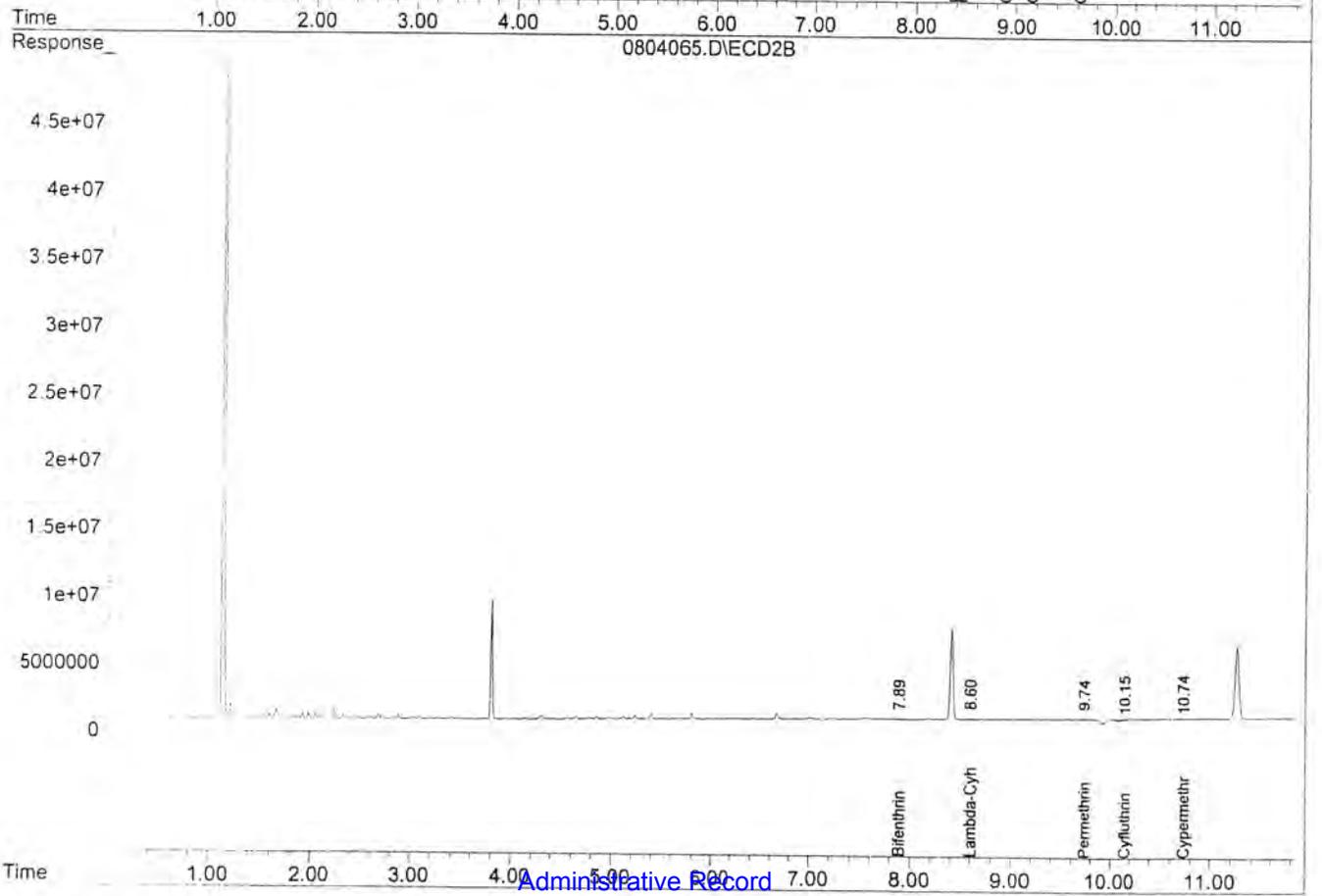
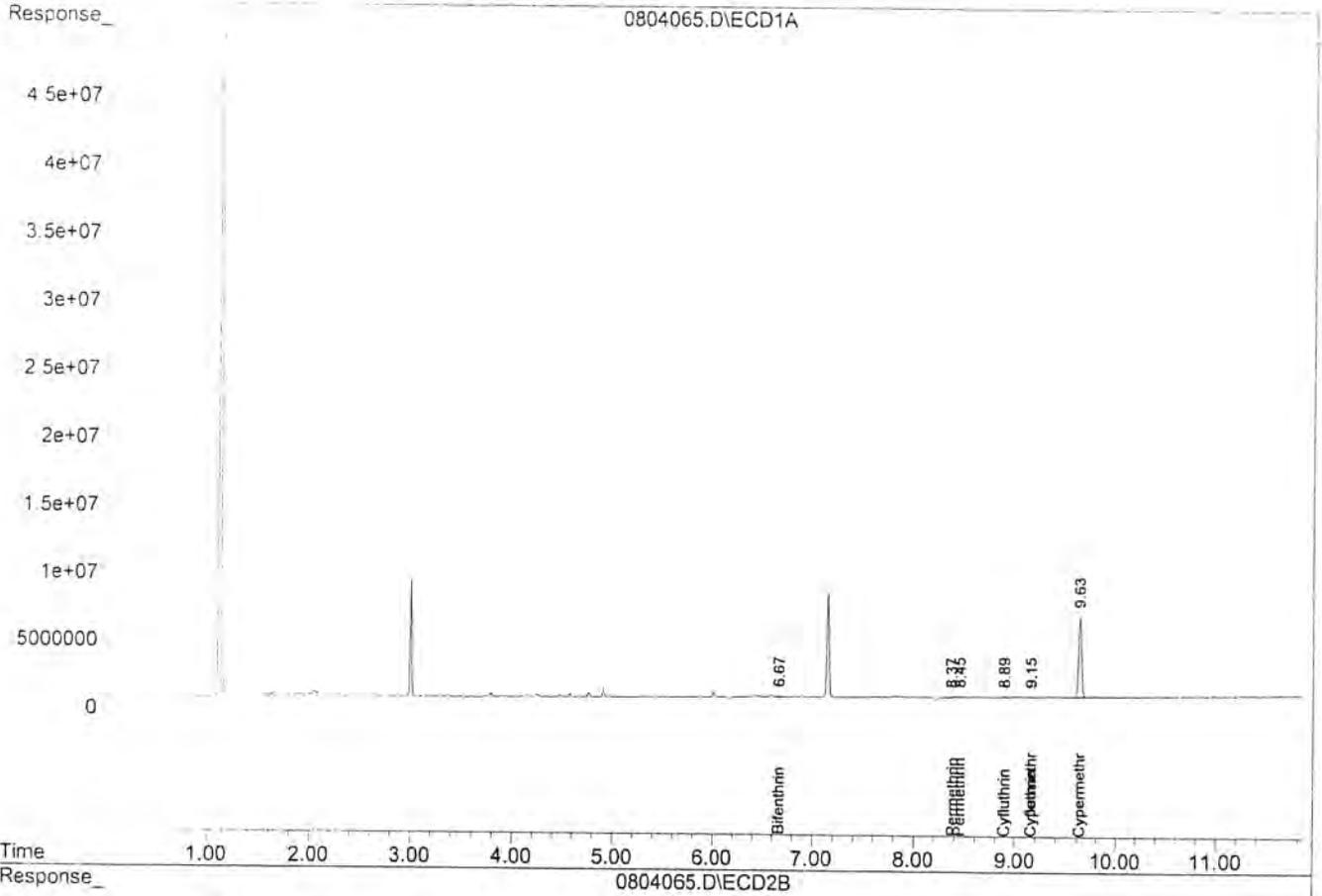
Compound	RT#1	RT#2	Resp#1	Resp#2	t#1	t#2
Target Compounds						
1) Bifenthrin	6.67	7.89	57002	22979	0.0040	0.0017 #
2) Lambda-Cyhalothr	0.00	8.60	0	44624	N.D.	0.0017 #
3) Permethrin 1	8.37	9.74	19261	12312	0.0059	0.0040 #
4) Permethrin 2	8.45	9.74	14160	12312	0.0061	0.0059 #
5) Cyfluthrin 1	8.89	10.15	8954	33771	0.0018	0.0078 #
6) Cyfluthrin 2	8.89	10.15	8954	33771	0.0014	0.0057 #
7) Cyfluthrin 3	9.15	10.15	14034	33771	0.0017	0.0074 #
8) Cypermethrin 1	9.15	10.74	14034	18961	0.0030	0.0045 #
9) Cypermethrin 2	9.15	10.74	14034	18961	0.0034	0.0052 #
10) Cypermethrin 3	9.63	10.74	5939128	18961	1.1441	0.0053 #
Target Compounds						
11) Asana/Fenvalerat	0.00	0.00	0	0	N.D.	N.D.
12) Asana/Fenvalerat	0.00	0.00	0	0	N.D.	N.D.

Quantitation Report

(Not Reviewed)

Data File : G:\LUCY\DATA\040804\0804065.D
Acq On : 8-5-04 18:32:20
Sample : AP73371W01 2/1050
Misc : WATER
Quant Method : G:\LUCY\DATA\040804\PRTH.M

Vial: 65
Operator: SA
Inst : Lucy
Multiplr: 1.90



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EPA 8081A Pyrethroids WATER

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark

Project: EAST SAN JOAQUIN RIVER WATERSHED COALIT

ARF: 45039

Sample ID: 01-DSAGR-031

APPL ID: AP73372

Sample Collection Date: 7/31/04

QCG: \$81PY-040804A-78222

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8081A	Cypermethrin	Not detected	0.10	ug/L	8/4/04	8/5/04
EPA 8081A	Esfenvalerate/Fenvalerate	Not detected	0.02	ug/L	8/4/04	8/5/04
EPA 8081A	Lambda cyhalothrin	Not detected	0.02	ug/L	8/4/04	8/5/04
EPA 8081A	Permethrin	Not detected	0.02	ug/L	8/4/04	8/5/04
EPA 8081A	Surrogate: DECA	61.0	25-143	%	8/4/04	8/5/04
EPA 8081A	Surrogate: TCmX	40.3	25-144	%	8/4/04	8/5/04

Run #: 66
Instrument: LUCY
Sequence: 040804
Dilution Factor: 1
Initials: SA

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804066.D\ECD1A.CH Vial: 66
 Signal #2 : G:\LUCY\DATA\040804\0804066.D\ECD2B.CH
 Acq On : 8-5-04 18:47:01 Operator: SA
 Sample : AP73372W01 2/1050 Inst : Lucy
 Misc : WATER Multiplr: 1.90
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 19:03 2004 Quant Results File: OCL.RES

Quant Method : G:\LUCY\DATA\040804\OCL.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 11:03:57 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

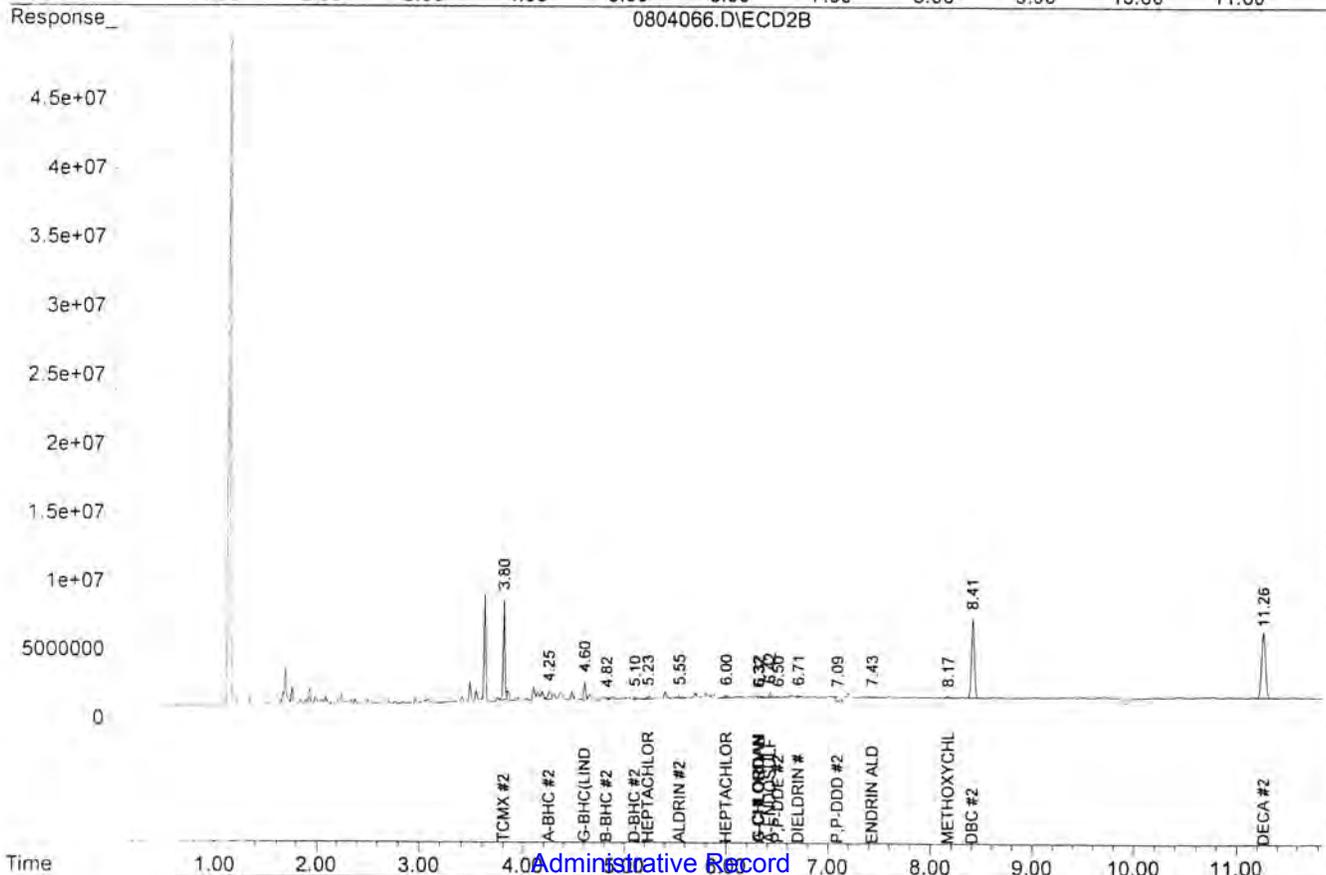
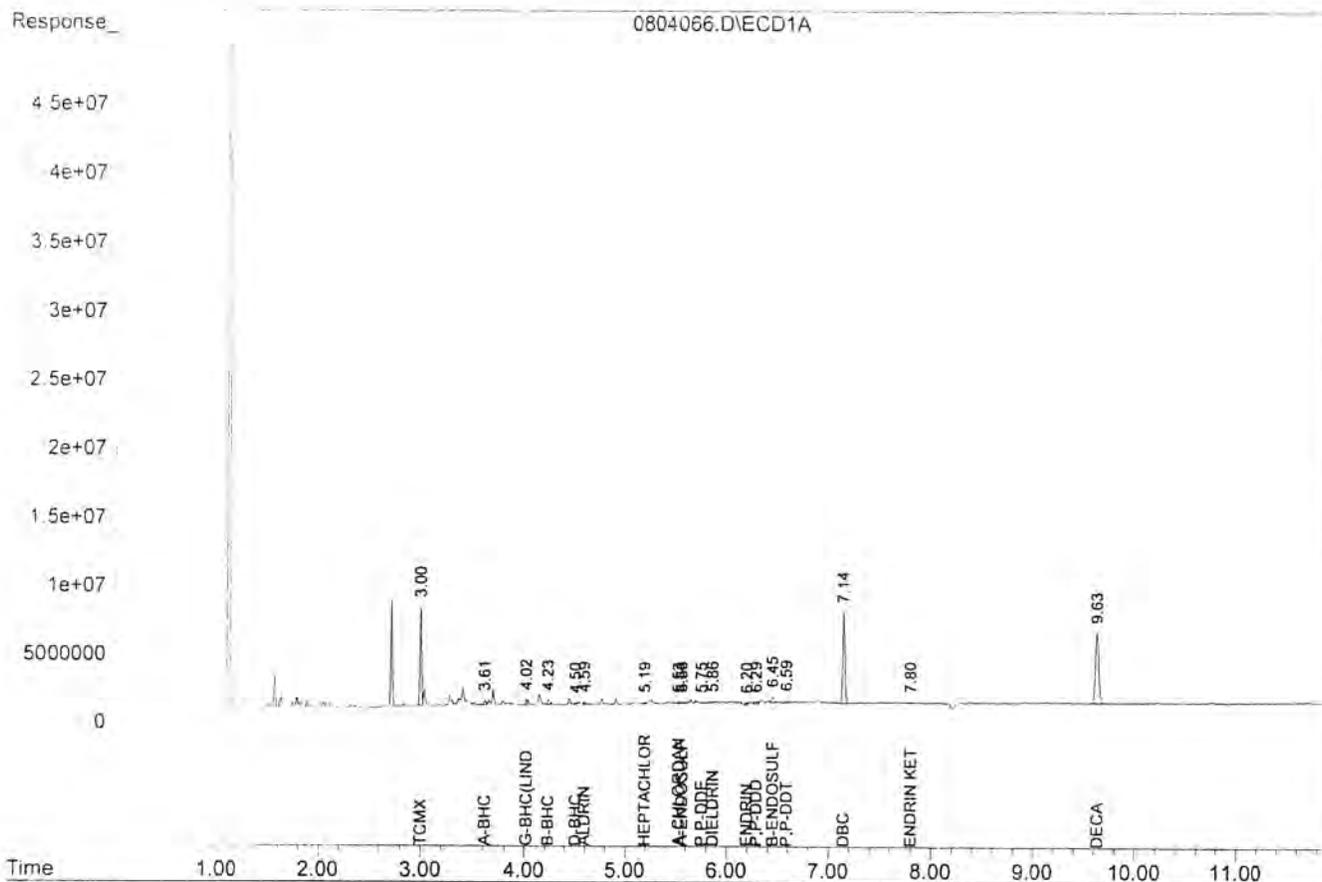
Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2
System Monitoring Compounds						
1) S TCMX	3.00	3.80	7219149	7333359	0.1139	0.1150
Surrogate Spike	0.286	Range	25 - 150	Recovery =	39.87%	<u>40.25%</u>
22) S DBC	7.14	8.41	6690539	5745561	0.1692	0.1596
Surrogate Spike	0.286			Recovery =	59.22%	55.86%
23) S DECA	9.63	11.26	5198248	4843836	0.1658	0.1743
Surrogate Spike	0.286	Range	25 - 150	Recovery =	58.03%	<u>61.01%</u>
Target Compounds						
2) TM A-BHC	3.61	4.25	344514	610301	0.0041	0.0072 #
3) TM B-BHC	4.23	4.82	332222	222578	0.0108	0.0071 #
4) M G-BHC (LINDANE)	4.02f	4.60	434660	1338032	0.0057	0.0176 #
TM D-BHC	4.50	5.10	127945	252238	0.0017	0.0033 #
M HEPTACHLOR	0.00	5.23	0	285818	N.D.	0.0041 #
7) M ALDRIN	4.59f	5.55	201908	253954	0.0031	0.0039 #
8) TM HEPTACHLOR EPOXI	5.19	6.00	145635	226350	0.0024	0.0036 #
9) TM G-CHLORDANE	0.00	6.32	0	140318	N.D.	0.0024 #
10) TM A-ENDOSULFAN	5.56	6.42	121399	327514	0.0023	0.0065 #
11) TM A-CHLORDANE	5.53	6.32f	66782	140318	0.0011	0.0025 #
12) TM P,P-DDE	5.75	6.50	53025	75716	0.0009	0.0013 #
13) M DIELDRIN	5.86	6.71	95385	154130	0.0015	0.0027 #
15) TM B-ENDOSULFAN	6.45	0.00	432117	0	0.0081	N.D. #
16) TM P,P-DDD	6.29	7.09	142823	336416	0.0028	0.0071 #
17) TM ENDRIN ALDEHYDE	0.00	7.43	0	127273	N.D.	0.0036 #
18) M P,P-DDT	6.59	0.00	158364	0	0.0031	N.D. #
20) TM ENDRIN KETONE	7.80	0.00	83729	0	0.0017	N.D. #
21) TM METHOXYCHLOR	0.00	8.17	0	116867	N.D.	0.0049 #
Target Compounds						
14) M ENDRIN	6.20	7.00	171749	82486	0.0034	N.D. #
19) TM ENDOSULFAN SULFA	0.00	0.00	0	0	N.D.	N.D. #

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\040804\0804066.D
 Acq On : 8-5-04 18:47:01
 Sample : AP73372W01 2/1050
 Misc : WATER
 Quant Method : G:\LUCY\DATA\040804\OCL.M

Vial: 66
 Operator: SA
 Inst : Lucy
 Multiplr: 1.90



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Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804066.D\ECD1A.CH Vial: 66
 Signal #2 : G:\LUCY\DATA\040804\0804066.D\ECD2B.CH
 Acq On : 8-5-04 18:47:01 Operator: SA
 Sample : AP73372W01 2/1050 Inst : Lucy
 Misc : WATER Multiplr: 1.90
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 19:04 2004 Quant Results File: PPTH.RES

Quant Method : G:\LUCY\DATA\040804\PPTH.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 16:39:19 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	t#1	t#2
Target Compounds						
1) Bifenthrin	6.59	7.61	158364	68959	0.0110	0.0050 #
2) Lambda-Cyhalothr	0.00	8.62	0	63651	N.D.	0.0025 #
3) Permethrin 1	8.39	9.50	322497	55011	0.0993	0.0181 #
4) Permethrin 2	8.55	9.74	60869	53911	0.0264	0.0259 #
5) Cyfluthrin 1	8.81	10.01	55553	420296	0.0114	0.0968 #
6) Cyfluthrin 2	8.92	10.42	90527	77664	0.0139	0.0131 #
7) Cyfluthrin 3	9.08	10.42	52373	77664	0.0064	0.0171 #
8) Cypermethrin 1	9.13	10.42	71649	77664	0.0153	0.0185 #
9) Cypermethrin 2	9.63	10.77	5198248	61504	1.2584	0.0168 #
10) Cypermethrin 3	9.63	10.77	5198248	61504	1.0014	0.0171 #
11) Asana/Fenvalerat	10.22	0.00	73510	0	0.0062	N.D. #
1) Asana/Fenvalerat	10.77	0.00	45012	0	0.0024	N.D. #

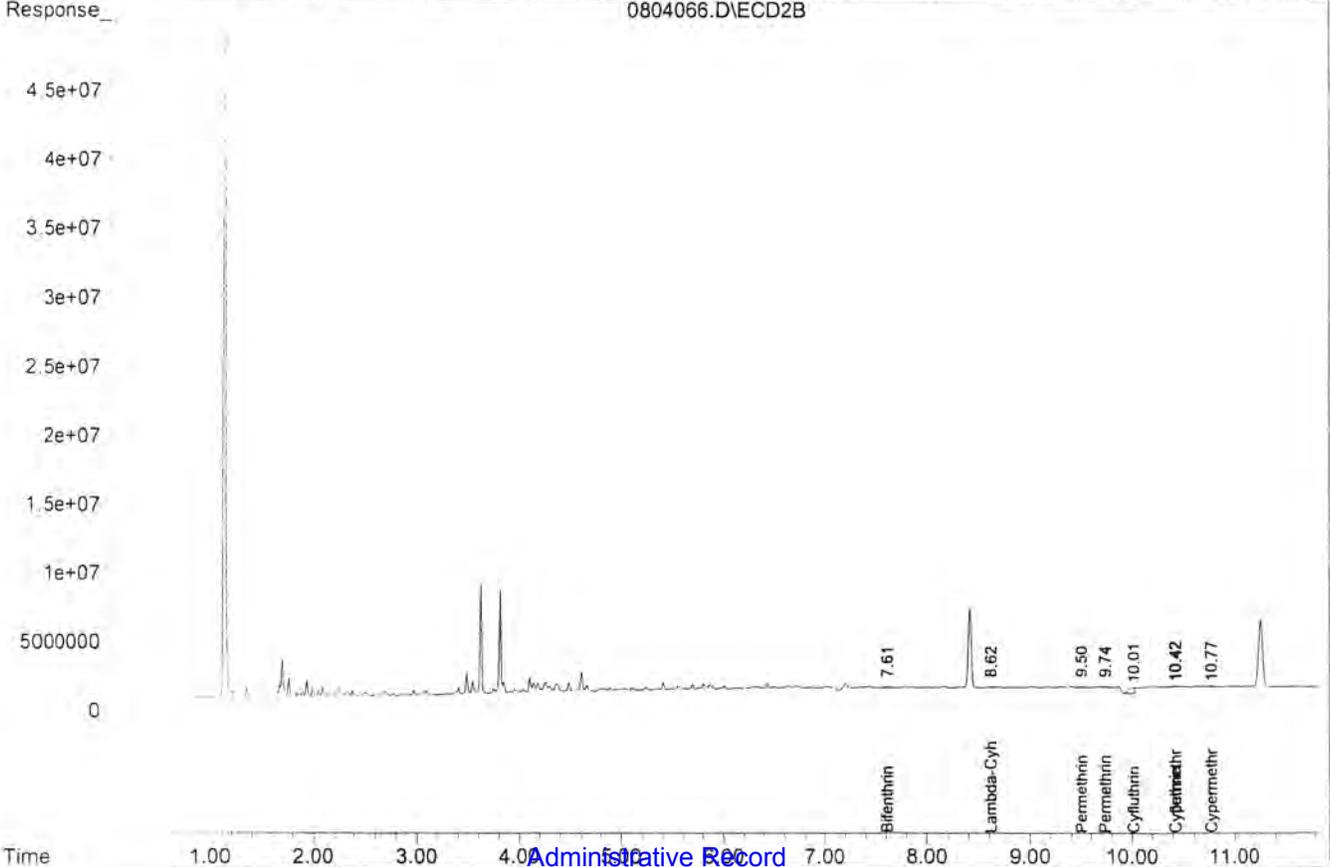
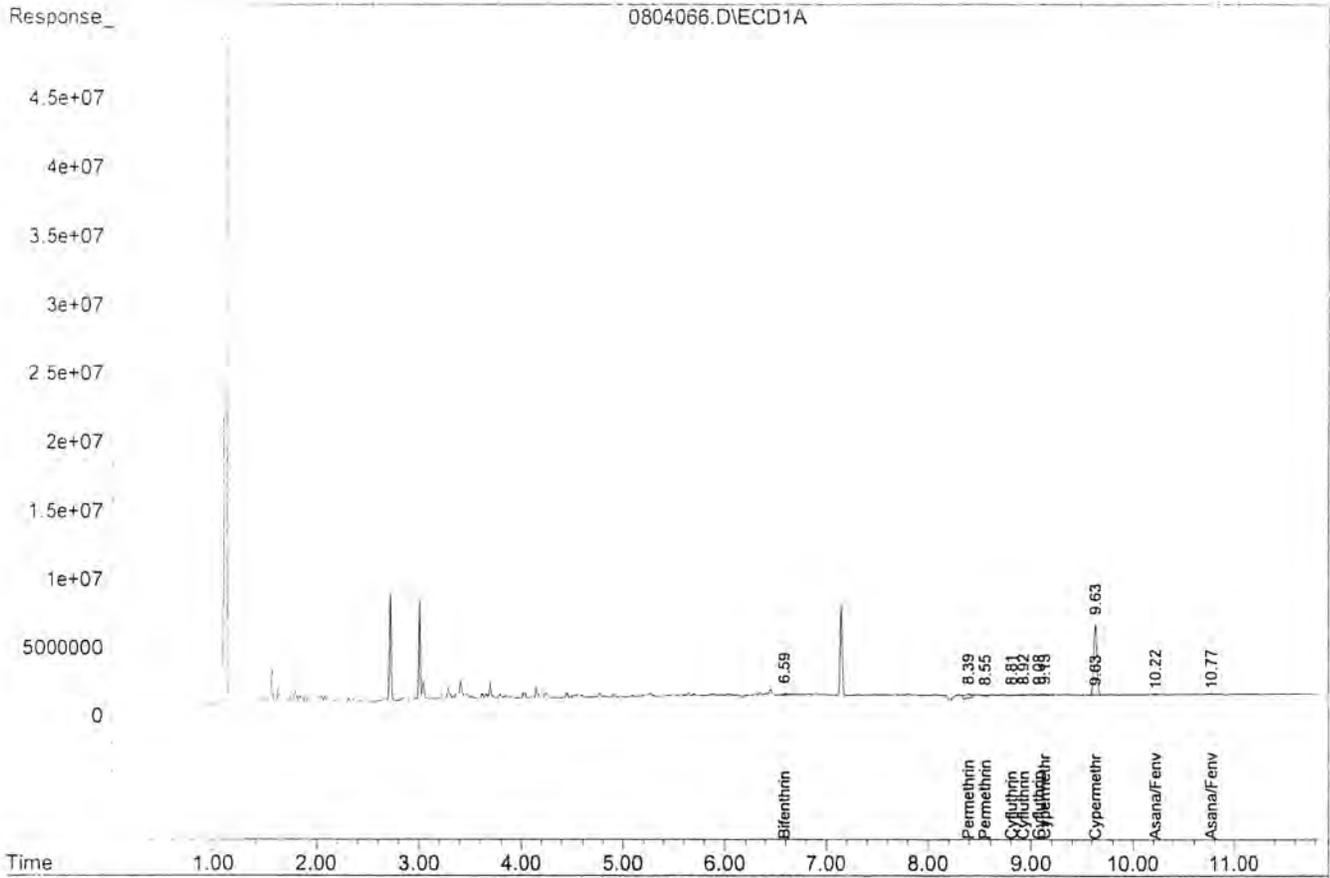
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Target Compounds

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\040804\0804066.D
Acq On : 8-5-04 18:47:01
Sample : AP73372W01 2/1050
Misc : WATER
Quant Method : G:\LUCY\DATA\040804\PRTH.M

Vial: 66
Operator: SA
Inst : Lucy
Multiplr: 1.90



EPA 8081A Pyrethroids WATER

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark

Project: EAST SAN JOAQUIN RIVER WATERSHED COALIT

ARF: 45039

Sample ID: 01-DSAGR-032

APPL ID: AP73373

Sample Collection Date: 7/31/04

QCG: \$81PY-040804A-78222

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8081A	Cypermethrin	Not detected	0.10	ug/L	8/4/04	8/5/04
EPA 8081A	Esfenvalerate/Fenvalerate	Not detected	0.02	ug/L	8/4/04	8/5/04
EPA 8081A	Lambda cyhalothrin	Not detected	0.02	ug/L	8/4/04	8/5/04
EPA 8081A	Permethrin	Not detected	0.02	ug/L	8/4/04	8/5/04
EPA 8081A	Surrogate: DECA	62.9	25-143	%	8/4/04	8/5/04
EPA 8081A	Surrogate: TCmX	48.8	25-144	%	8/4/04	8/5/04

Run #: 67
Instrument: LUCY
Sequence: 040804
Dilution Factor: 1
Initials: SA

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804067.D\ECD1A.CH Vial: 67
 Signal #2 : G:\LUCY\DATA\040804\0804067.D\ECD2B.CH
 Acq On : 8-5-04 19:01:40 Operator: SA
 Sample : AP73373W01 2/1050 Inst : Lucy
 Misc : WATER Multiplr: 1.90
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 6 8:43 2004 Quant Results File: OCL.RES

Quant Method : G:\LUCY\DATA\040804\OCL.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 11:03:57 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

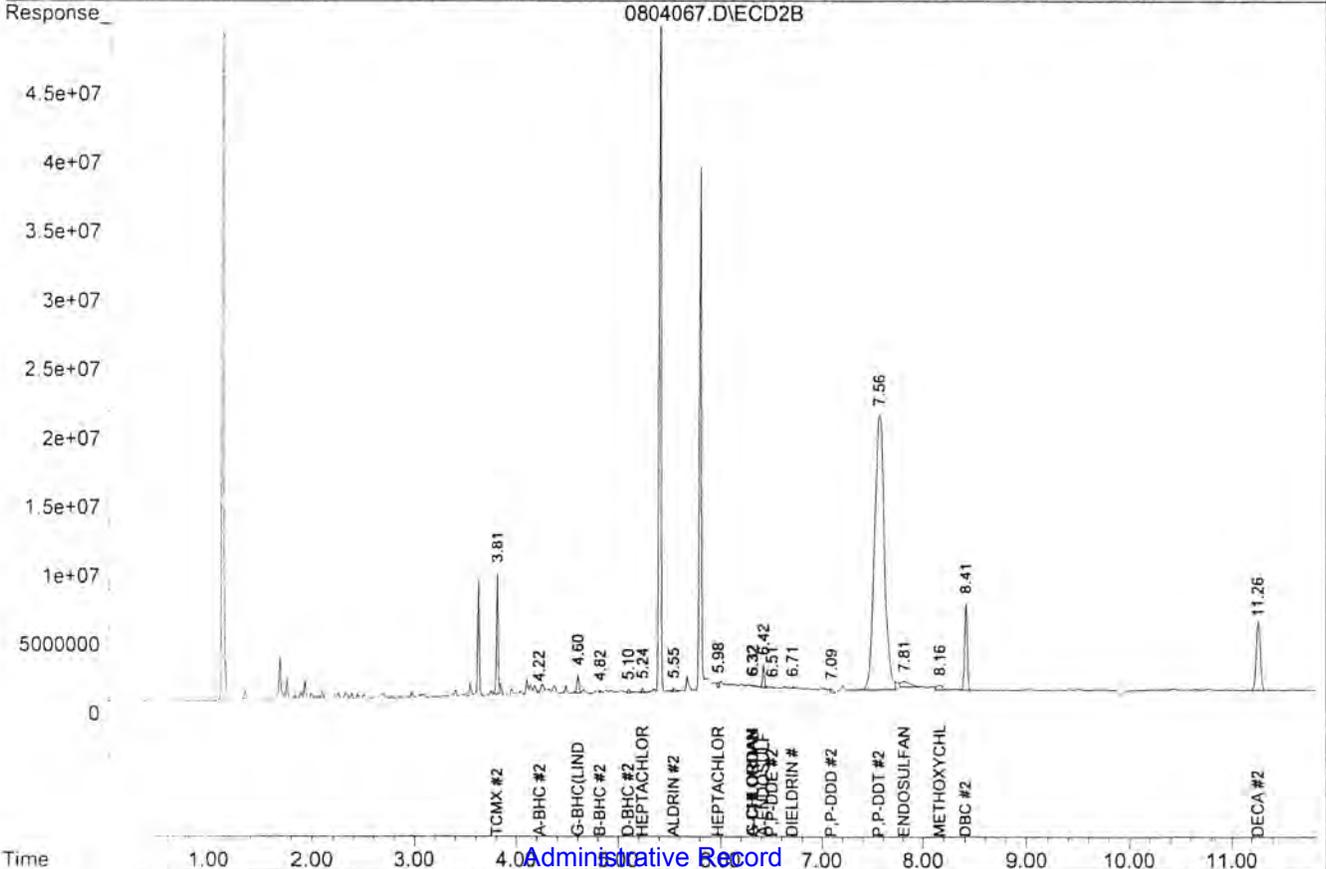
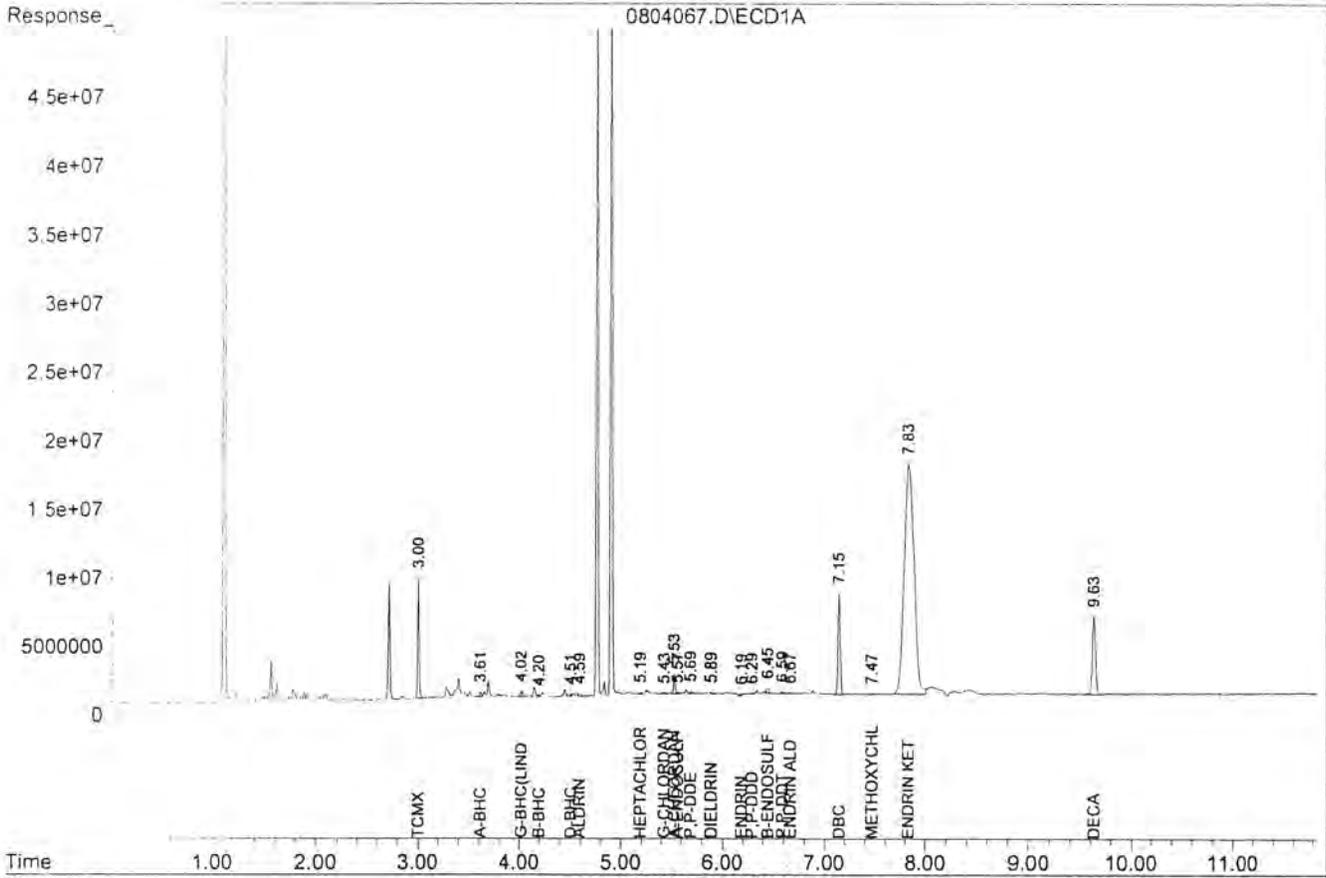
Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2
System Monitoring Compounds						
1) S TCMX	3.00	3.81	8798301	8886827	0.1388	0.1393
Surrogate Spike	0.286	Range	25 - 150	Recovery =	48.58%	<u>48.76%</u>
22) S DBC	7.15	8.41	7437152	6328366	0.1881	0.1758
Surrogate Spike	0.286			Recovery =	65.83%	61.53%
23) S DECA	9.63	11.26	5686599	4995395	0.1814	0.1798
Surrogate Spike	0.286	Range	25 - 150	Recovery =	63.49%	<u>62.93%</u>
Target Compounds						
2) TM A-BHC	3.61	4.22	372441	126360	0.0045	0.0015 #
3) TM B-BHC	4.20	4.82	128410	137660	0.0042	0.0044
4) M G-BHC (LINDANE)	4.02f	4.60	444953	1334870	0.0058	0.0176 #
5) TM D-BHC	4.51	5.10	159314	258519	0.0021	0.0033 #
6) M HEPTACHLOR	0.00	5.24	0	299662	N.D.	0.0043 #
7) M ALDRIN	4.59f	5.55	224986	236264	0.0035	0.0036
8) TM HEPTACHLOR EPOXI	5.19	5.98	121467	330982	0.0020	0.0053 #
9) TM G-CHLORDANE	5.43	6.32	70260	96267	0.0011	0.0016 #
10) TM A-ENDOSULFAN	5.57	6.42	95797	1659891	0.0018	0.0330 #
11) TM A-CHLORDANE	5.53	6.32f	1450911	96267	0.0243	0.0017 #
12) TM P,P-DDE	5.69	6.51	165727	87909	0.0027	0.0015 #
13) M DIELDRIN	5.89	6.71	95661	141262	0.0015	0.0025 #
15) TM B-ENDOSULFAN	6.45	0.00	396943	0	0.0075	N.D. #
16) TM P,P-DDD	6.29	7.09	49569	251138	0.0010	0.0053 #
17) TM ENDRIN ALDEHYDE	6.67f	0.00	62282	0	0.0016	N.D. #
18) M P,P-DDT	6.59	7.56	159049	19981522	0.0031	0.4408 #
19) TM ENDOSULFAN SULFA	0.00	7.81	0	410968	N.D.	0.0104 #
20) TM ENDRIN KETONE	7.83f	0.00	16799959	0	0.3427	N.D. #
21) TM METHOXYCHLOR	7.47	8.16	43983	354522	0.0018	0.0149 #
Target Compounds						
14) M ENDRIN	6.19	7.00	142169	96343	0.0028	N.D. #

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\040804\0804067.D
 Acq On : 8-5-04 19:01:40
 Sample : AP73373W01 2/1050
 Misc : WATER
 Quant Method : G:\LUCY\DATA\040804\OCL.M

Vial: 67
 Operator: SA
 Inst : Lucy
 Multiplr: 1.90



Administrative Record
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Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804067.D\ECD1A.CH Vial: 67
 Signal #2 : G:\LUCY\DATA\040804\0804067.D\ECD2B.CH
 Acq On : 8-5-04 19:01:40 Operator: SA
 Sample : AP73373W01 2/1050 Inst : Lucy
 Misc : WATER Multiplr: 1.90
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 6 8:53 2004 Quant Results File: PPTH.RES

Quant Method : G:\LUCY\DATA\040804\PPTH.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 16:39:19 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	t#1	t#2	
Target Compounds							
1) Bifenthrin	6.67	7.81	62282	410968	0.0043	0.0298	# f
2) Lambda-Cyhalothr	7.47	8.41	43983	6328366	0.0016	0.2447	#
3) Permethrin 1	8.40	9.50	346126	72988	0.1066	0.0240	#
4) Permethrin 2	8.43	9.67	299256	66377	0.1299	0.0319	#
5) Cyfluthrin 1	8.81	10.01	45986	386534	0.0094	0.0890	#
6) Cyfluthrin 2	8.92	10.43	102940	98794	0.0158	0.0166	#
7) Cyfluthrin 3	9.08	10.43	54531	98794	0.0067	0.0217	#
8) Cypermethrin 1	9.13	10.62	89199	43882	0.0190	0.0105	#
9) Cypermethrin 2	9.63	10.62	5686599	43882	1.3766	0.0120	#
10) Cypermethrin 3	9.63	10.77	5686599	65997	1.0955	0.0183	#
Asana/Fenvalerat	10.22	0.00	62629	0	0.0053	N.D.	#
Asana/Fenvalerat	10.77	0.00	50394	0	0.0026	N.D.	#

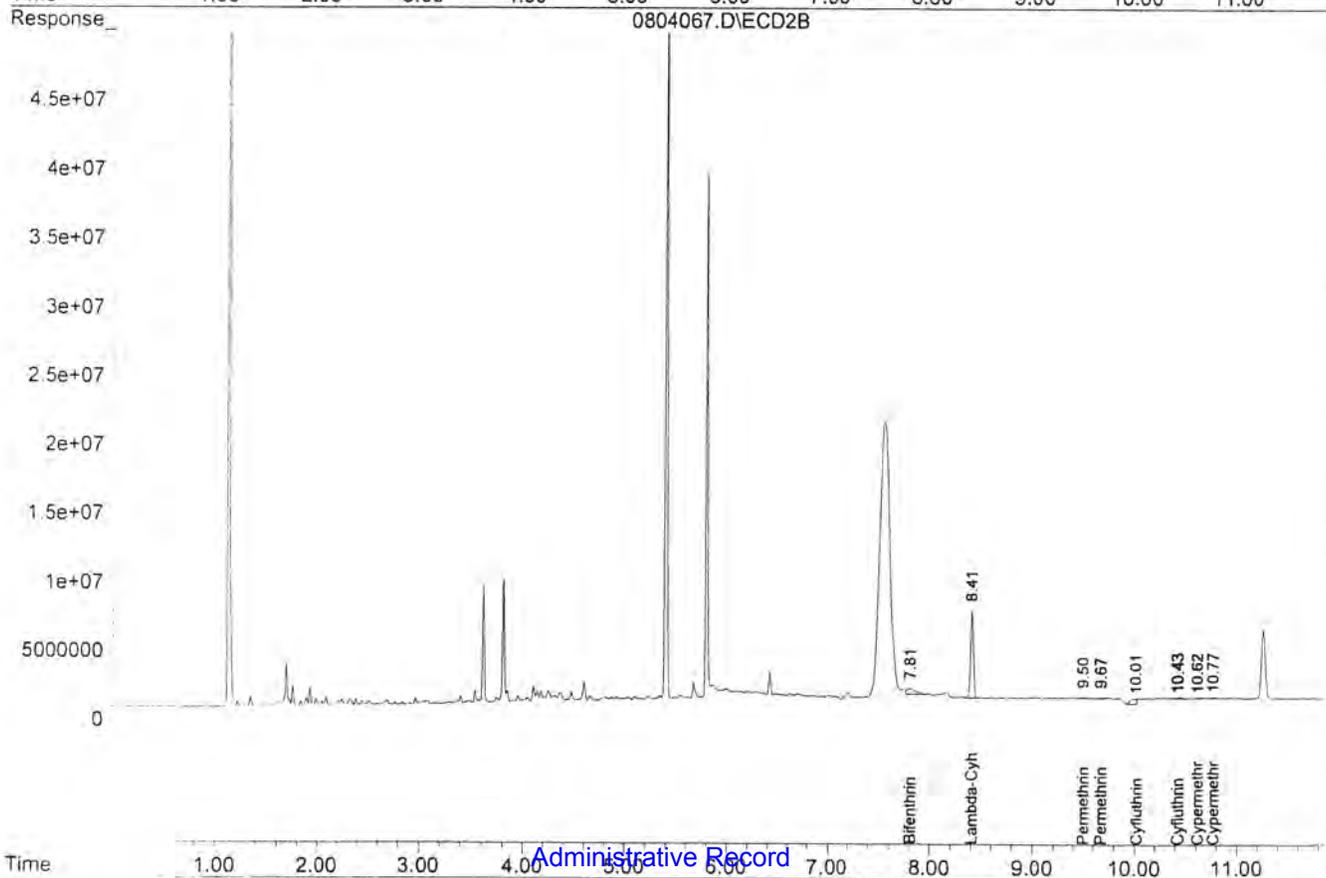
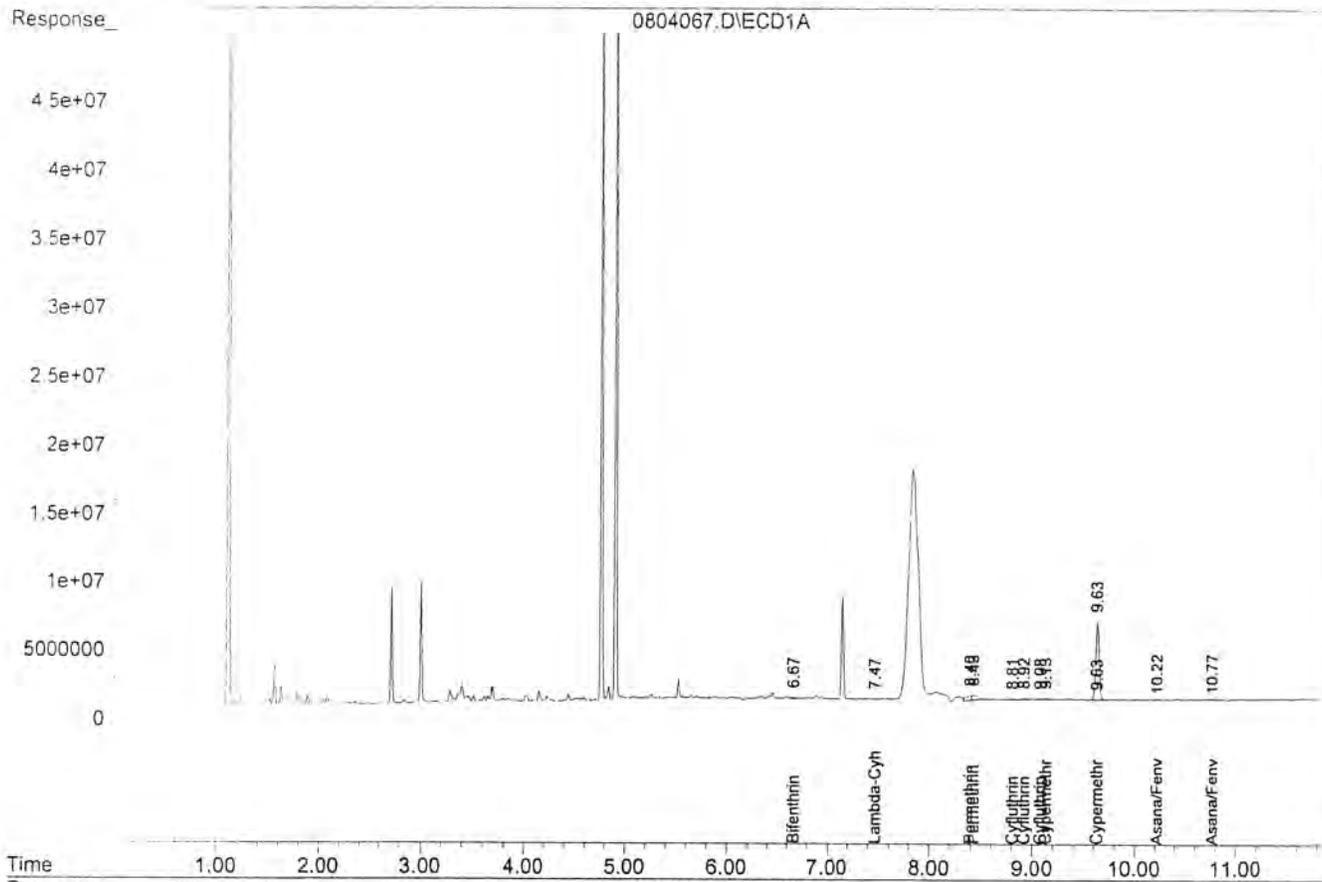
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Target Compounds

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\040804\0804067.D
 Acq On : 8-5-04 19:01:40
 Sample : AP73373W01 2/1050
 Misc : WATER
 Quant Method : G:\LUCY\DATA\040804\PRTH.M

Vial: 67
 Operator: SA
 Inst : Lucy
 Multiplr: 1.90



Administrative Record
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EPA 8081A Pyrethroids WATER

Pacific EcoRisk
835 Arnold Drive, Suite 104
Martinez, CA 94553

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Stephen Clark

Project: EAST SAN JOAQUIN RIVER WATERSHED COALIT

Sample ID: 01-DCAGR-040

Sample Collection Date: 7/31/04

ARF: 45039

APPL ID: AP73374

QCG: \$81PY-040804A-78222

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8081A	Cypermethrin	Not detected	0.10	ug/L	8/4/04	8/5/04
EPA 8081A	Esfenvalerate/Fenvalerate	Not detected	0.02	ug/L	8/4/04	8/5/04
EPA 8081A	Lambda cyhalothrin	Not detected	0.02	ug/L	8/4/04	8/5/04
EPA 8081A	Permethrin	Not detected	0.02	ug/L	8/4/04	8/5/04
EPA 8081A	Surrogate: DECA	60.6	25-143	%	8/4/04	8/5/04
EPA 8081A	Surrogate: TCmX	45.8	25-144	%	8/4/04	8/5/04

Run #: 68
Instrument: LUCY
Sequence: 040804
Dilution Factor: 1
Initials: SA

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804068.D\ECD1A.CH Vial: 68
 Signal #2 : G:\LUCY\DATA\040804\0804068.D\ECD2B.CH
 Acq Cn : 8-5-04 19:16:28 Operator: SA
 Sample : AP73374W01 2/1050 Inst : Lucy
 Misc : WATER Multiplr: 1.90
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 6 8:43 2004 Quant Results File: OCL.RES

Quant Method : G:\LUCY\DATA\040804\OCL.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 11:03:57 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

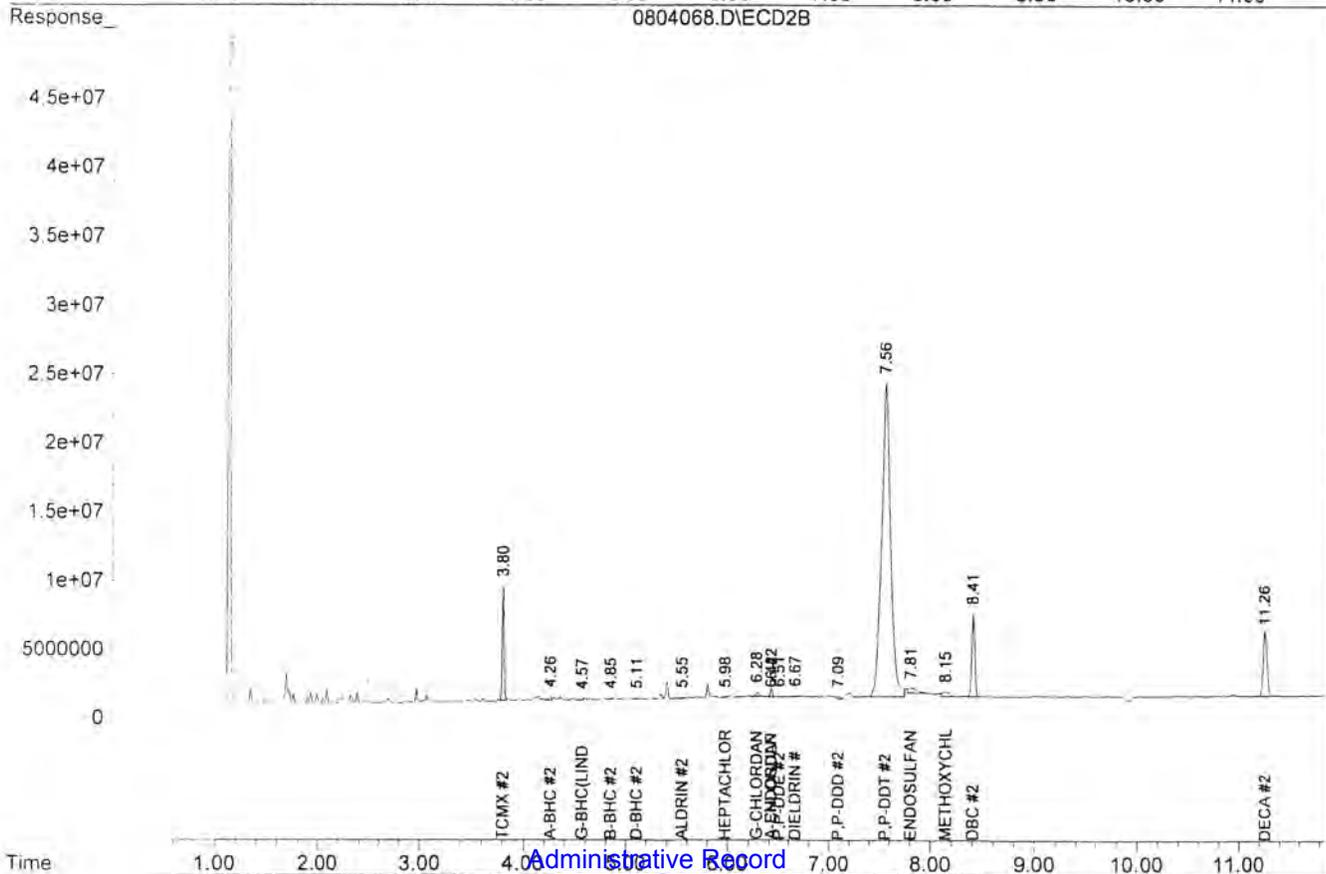
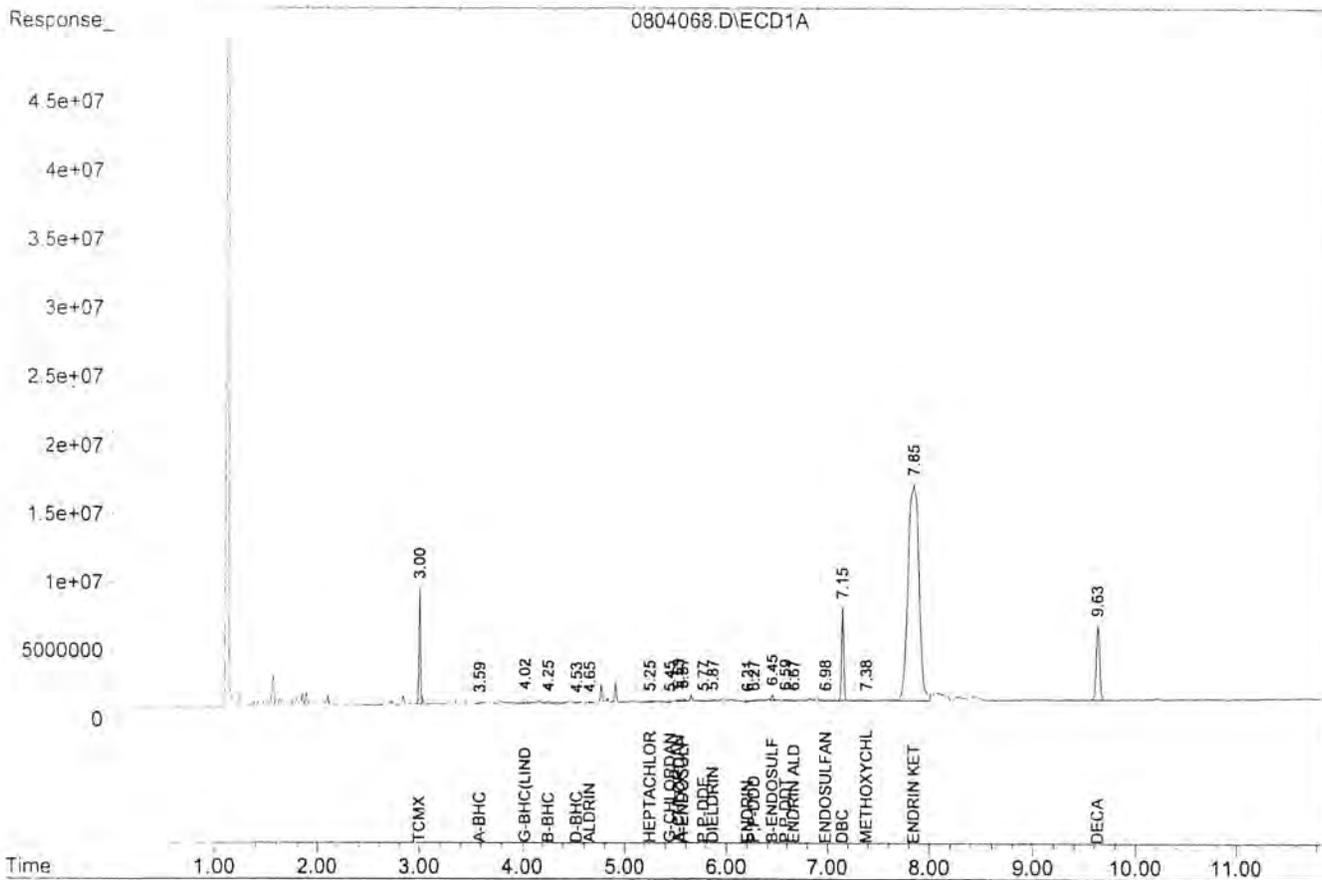
Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2
System Monitoring Compounds						
1) S TCMX	3.00	3.80	8489580	8336402	0.1339	0.1307
Surrogate Spike	0.286	Range 25 - 150	Recovery =		46.87%	45.75%
22) S DBC	7.15	8.41	6783821	6021980	0.1715	0.1673
Surrogate Spike	0.286		Recovery =		60.03%	58.56%
23) S DECA	9.63	11.26	5445203	4808515	0.1737	0.1730
Surrogate Spike	0.286	Range 25 - 150	Recovery =		60.80%	60.55%
Target Compounds						
2) TM A-BHC	3.59	4.26	82005	247814	0.0010	0.0029 #
3) TM B-BHC	4.25f	4.85	190110	82580	0.0062	0.0026 #
M G-BHC (LINDANE)	4.02f	4.57	323565	97306	0.0042	0.0013 #
) TM D-BHC	4.53	5.11	47388	78724	0.0006	0.0010 #
7) M ALDRIN	4.65	5.55	47424	83617	0.0007	0.0013 #
8) TM HEPTACHLOR EPOXI	5.25f	5.98	94440	49170	0.0015	0.0008 #
9) TM G-CHLORDANE	5.45	6.28	45749	337092	0.0007	0.0057 #
10) TM A-ENDOSULFAN	5.57	6.42	233553	618849	0.0044	0.0123 #
11) TM A-CHLORDANE	5.53	6.42f	151691	618849	0.0025	0.0108 #
12) TM P,P-DDE	5.77f	6.51	21214	48870	0.0003	0.0008 #
13) M DIELDRIN	5.87	6.67f	87616	48936	0.0014	0.0009 #
15) TM B-ENDOSULFAN	6.45	0.00	386444	0	0.0073	N.D. #
16) TM P,P-DDD	6.27	7.09	35296	179099	0.0007	0.0038 #
17) TM ENDRIN ALDEHYDE	6.67f	0.00	44874	0	0.0012	N.D. #
18) M P,P-DDT	6.59	7.56	78287	22847146	0.0015	0.5040 #
19) TM ENDOSULFAN SULFA	6.98	7.81f	23306	378392	0.0005	0.0096 #
20) TM ENDRIN KETONE	7.85f	0.00	15757671	0	0.3214	N.D. #
21) TM METHOXYCHLOR	7.38f	8.15	59601	356139	0.0025	0.0150 #
Target Compounds						
6) M HEPTACHLOR	0.00	0.00	0	0	N.D.	N.D.
14) M ENDRIN	6.21	7.00	78513	89034	0.0016	N.D. #

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\040804\0804068.D
 Acq On : 8-5-04 19:16:28
 Sample : AP73374W01 2/1050
 Misc : WATER
 Quant Method : G:\LUCY\DATA\040804\OCL.M

Vial: 68
 Operator: SA
 Inst : Lucy
 Multiplr: 1.90



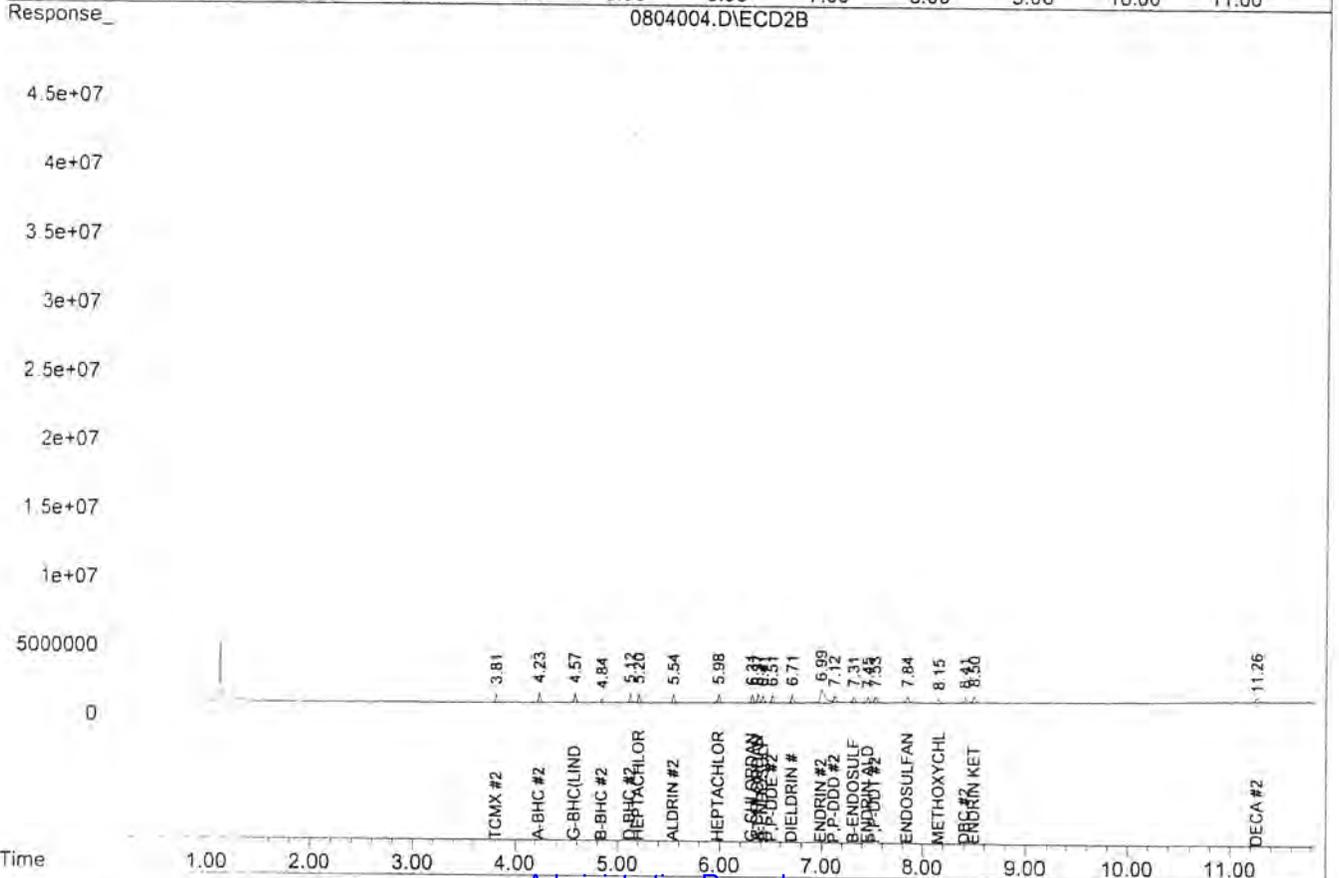
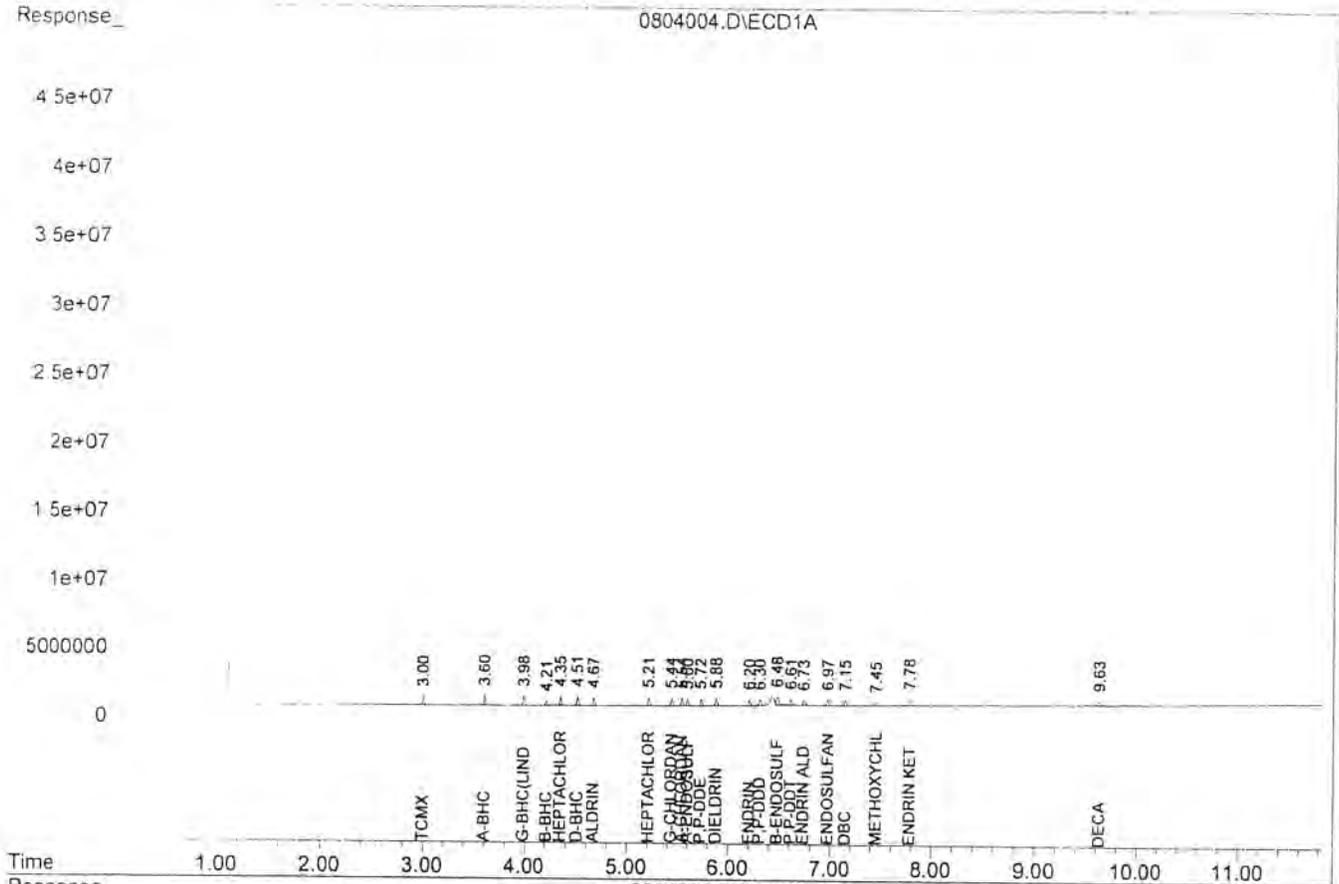
Administrative Record
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Quantitation Report

(Not Reviewed)

Data File : G:\LUCY\DATA\040804\0804004.D
Acq On : 8-4-04 16:44:11
Sample : OCL-1 8/2/04
Misc : WATER
Quant Method : G:\LUCY\DATA\040804\OCL.M

Vial: 4
Operator: SA
Inst : Lucy
Multiplr: 1.00



Administrative Record

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804005.D\ECD1A.CH Vial: 5
 Signal #2 : G:\LUCY\DATA\040804\0804005.D\ECD2B.CH
 Acq On : 8-4-04 16:58:51 Operator: SA
 Sample : OCL-2 8/2/04 Inst : Lucy
 Misc : WATER Multiplr: 1.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 13:11 2004 Quant Results File: OCL.RES

Quant Method : G:\LUCY\DATA\040804\OCL.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 11:03:57 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

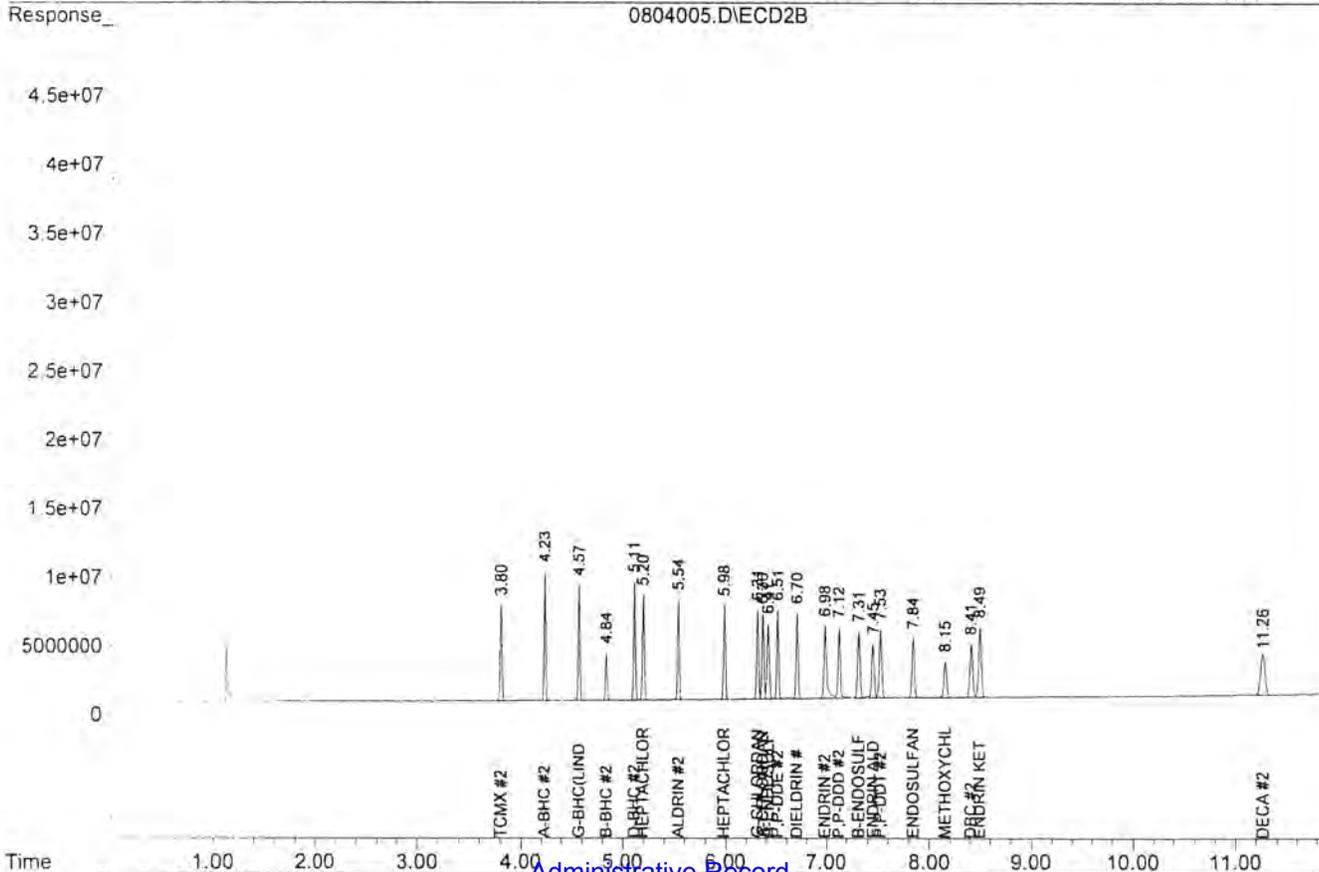
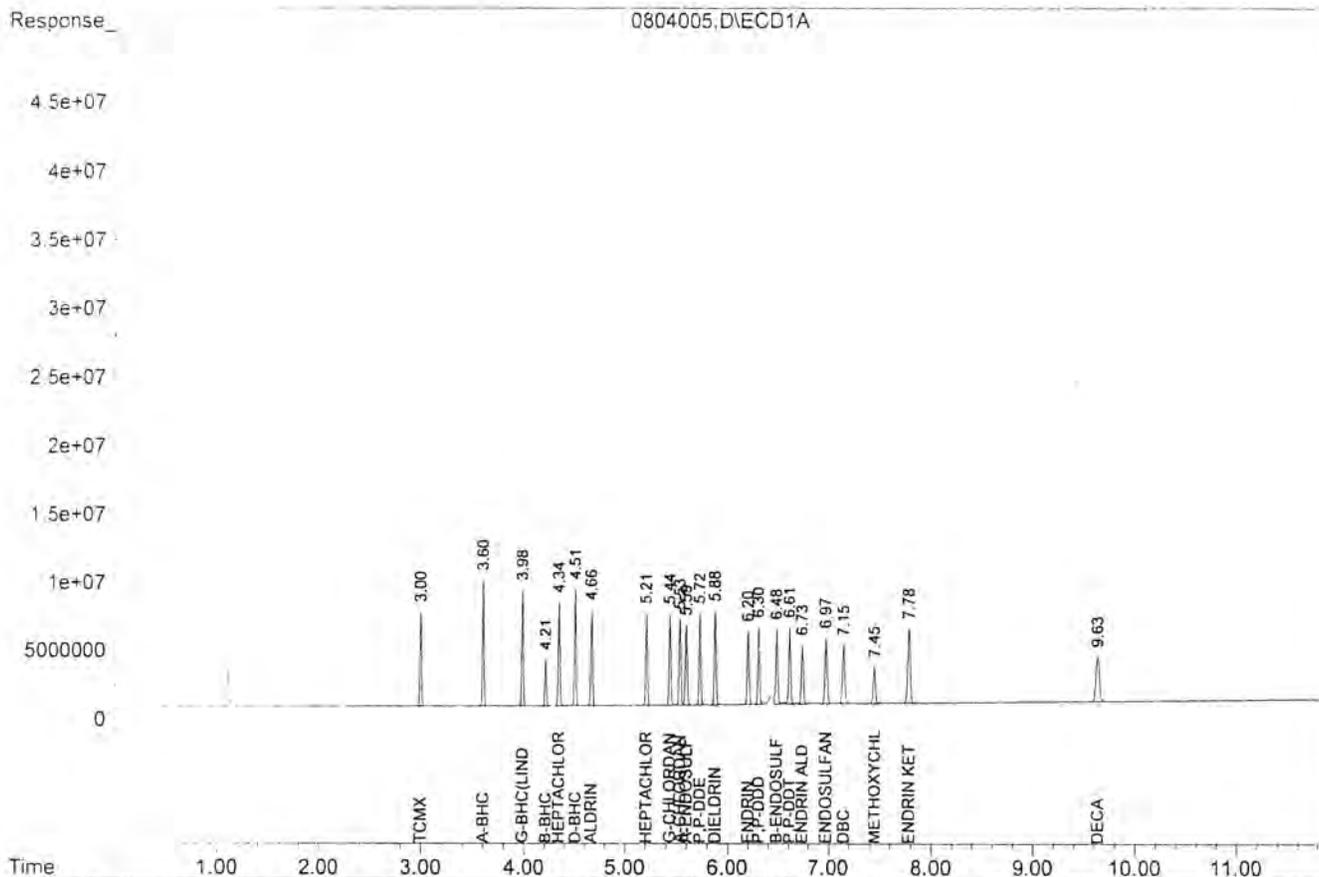
Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2
System Monitoring Compounds						
1) S TCMX	3.00	3.80	6930429	6979200	0.0574	0.0574
Surrogate Spike	0.150	Range 25 - 150	Recovery =		38.27%	38.27%
22) S DBC	7.15	8.41	4255724	3874684	0.0565	0.0565
Surrogate Spike	0.150		Recovery =		37.67%	37.67%
23) S DECA	9.63	11.26	3283580	3005172	0.0550	0.0568
Surrogate Spike	0.150	Range 25 - 150	Recovery =		36.67%	37.87%
Target Compounds						
2) TM A-BHC	3.60	4.23	9226285	9414686	0.0582	0.0586
3) TM B-BHC	4.21	4.84	3379689	3438240	0.0577	0.0577
4) M G-BHC (LINDANE)	3.98	4.57	8497708	8373301	0.0586	0.0580
TM D-BHC	4.51	5.11	8568937	8596816	0.0585	0.0584
M HEPTACHLOR	4.34	5.20	7579398	7635807	0.0574	0.0577
7) M ALDRIN	4.66	5.54	7036491	7282173	0.0574	0.0588
8) TM HEPTACHLOR EPOXI	5.21	5.98	6735764	6822917	0.0572	0.0572
9) TM G-CHLORDANE	5.44	6.31	6702300	6482266	0.0575	0.0579
10) TM A-ENDOSULFAN	5.59	6.41	5855809	5507366	0.0581	0.0575
11) TM A-CHLORDANE	5.53	6.36	6332062	6246782	0.0556	0.0573
12) TM P, P-DDE	5.72	6.51	6740323	6477705	0.0571	0.0586
13) M DIELDRIN	5.88	6.70	6869833	6238501	0.0576	0.0576
14) M ENDRIN	6.20	6.98	5394394	5276959	0.0565	0.0553
15) TM B-ENDOSULFAN	6.48	7.31	5470305	4836270	0.0541	0.0583
16) TM P, P-DDD	6.30	7.12	5643924	5150570	0.0581	0.0569
17) TM ENDRIN ALDEHYDE	6.73	7.45	4313370	3992764	0.0582	0.0586
18) M P, P-DDT	6.61	7.53	5619581	4972715	0.0578	0.0576
19) TM ENDOSULFAN SULFA	6.97	7.84	4806556	4349834	0.0582	0.0578
20) TM ENDRIN KETONE	7.78	8.49	5467099	5087935	0.0585	0.0590
21) TM METHOXYCHLOR	7.45	8.15	2693248	2640319	0.0586	0.0584

Target Compounds

Data File : G:\LUCY\DATA\040804\0804005.D
 Acq On : 8-4-04 16:58:51
 Sample : OCL-2 8/2/04
 Misc : WATER
 Quant Method : G:\LUCY\DATA\040804\OCL.M

Vial: 5
 Operator: SA
 Inst : Lucy
 Multiplr: 1.00



Administrative Record
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Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804006.D\ECD1A.CH Vial: 6
 Signal #2 : G:\LUCY\DATA\040804\0804006.D\ECD2B.CH
 Acq On : 8-4-04 17:13:29 Operator: SA
 Sample : OCL-3 8/2/04 Inst : Lucy
 Misc : WATER Multiplr: 1.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 13:12 2004 Quant Results File: OCL.RES

Quant Method : G:\LUCY\DATA\040804\OCL.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 11:03:57 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

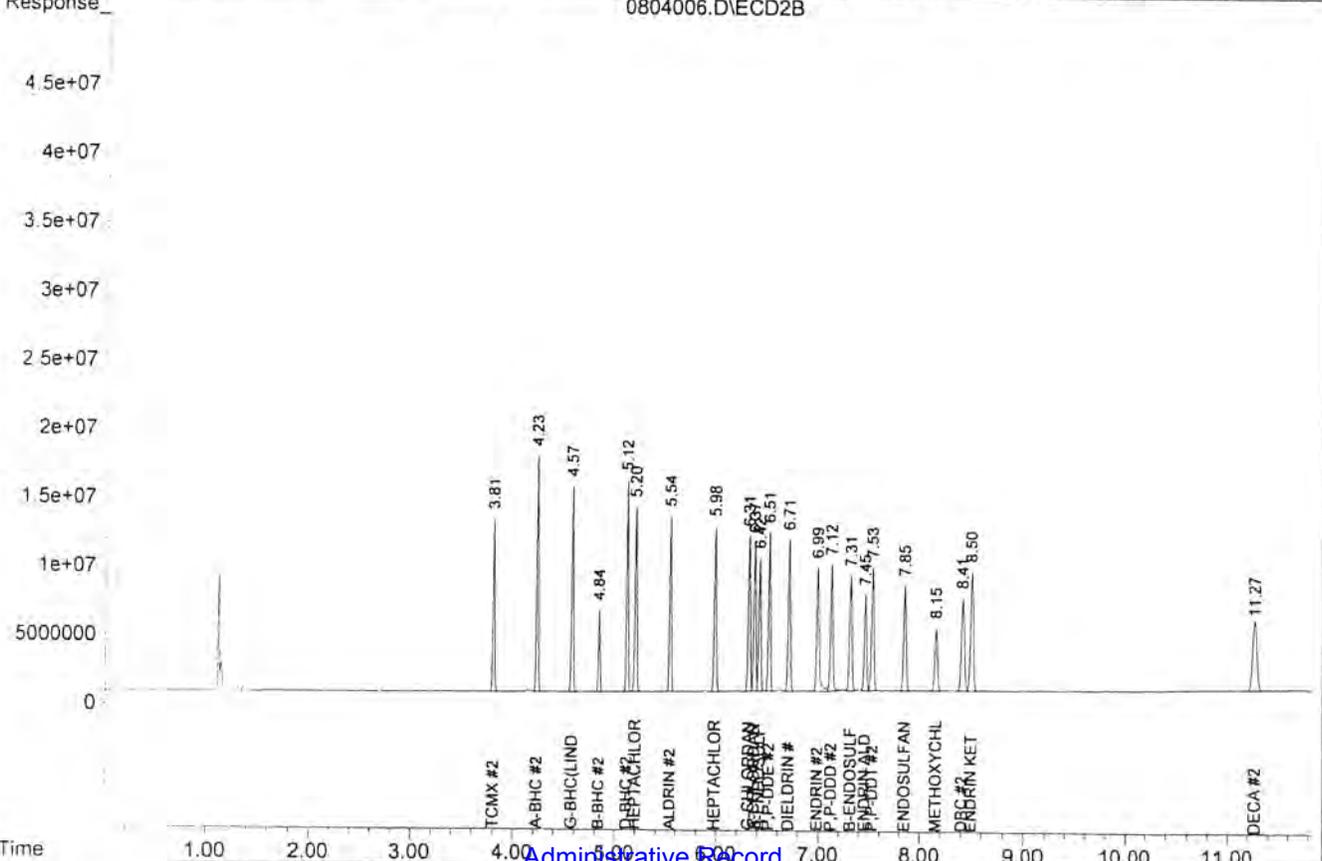
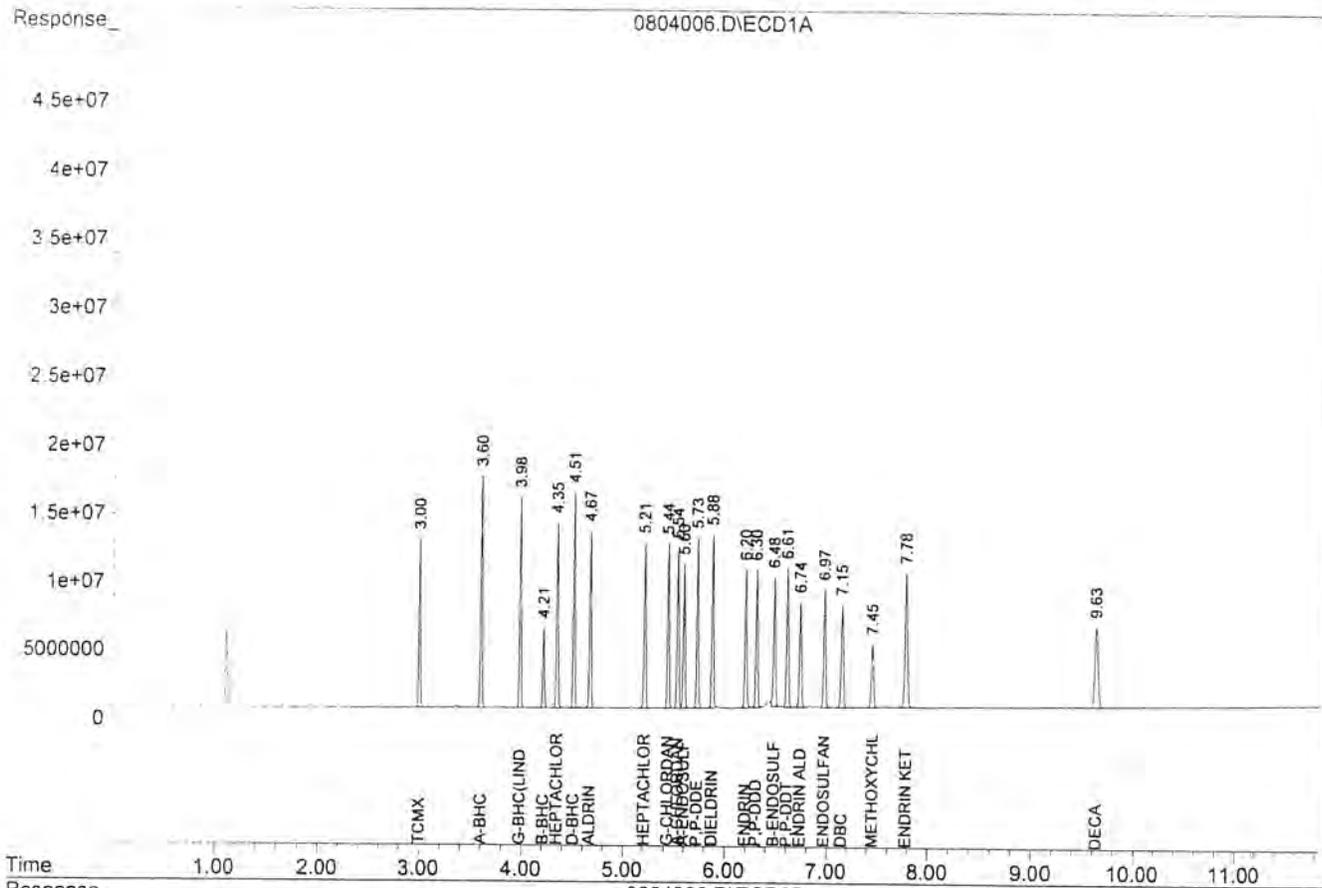
Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2
System Monitoring Compounds						
1) S TCMX	3.00	3.81	12325313	12572535	0.1021	0.1035
Surrogate Spike	0.150	Range	25 - 150	Recovery =	68.07%	69.00%
22) S DBC	7.15	8.41	7510093	6760249	0.0997	0.0986
Surrogate Spike	0.150			Recovery =	66.47%	65.73%
23) S DECA	9.63	11.27	5872204	5065624	0.0983	0.0957
Surrogate Spike	0.150	Range	25 - 150	Recovery =	65.53%	63.80%
Target Compounds						
2) TM A-BHC	3.60	4.23	16956810	17172624	0.1069	0.1070
3) TM B-BHC	4.21	4.84	5874685	5952768	0.1004	0.1000
4) M G-BHC (LINDANE)	3.98	4.57	15404589	14979322	0.1062	0.1037
5) TM D-BHC	4.51	5.12	15789339	15394679	0.1078	0.1046
6) M HEPTACHLOR	4.35	5.20	13530905	13467013	0.1026	0.1018
7) M ALDRIN	4.67	5.54	12935255	12792618	0.1055	0.1032
8) TM HEPTACHLOR EPOXI	5.21	5.98	12091365	12045968	0.1026	0.1010
9) TM G-CHLORDANE	5.44	6.31	12026058	11335005	0.1032	0.1012
10) TM A-ENDOSULFAN	5.60	6.42	10513214	9705010	0.1043	0.1013
11) TM A-CHLORDANE	5.54	6.37	11686731	10841178	0.1027	0.0995
12) TM P, P-DDE	5.73	6.51	12451708	11575467	0.1056	0.1047
13) M DIELDRIN	5.88	6.71	12666228	11053295	0.1062	0.1020
14) M ENDRIN	6.20	6.99	10089885	8991138	0.1058	0.0975
15) TM B-ENDOSULFAN	6.48	7.31	9424708	8355825	0.0932	0.1007
16) TM P, P-DDD	6.30	7.12	10051517	9208656	0.1035	0.1018
17) TM ENDRIN ALDEHYDE	6.74	7.45	7675297	6961765	0.1035	0.1022
18) M P, P-DDT	6.61	7.53	10162341	8960198	0.1045	0.1038
19) TM ENDOSULFAN SULFA	6.97	7.85	8609571	7663199	0.1042	0.1018
20) TM ENDRIN KETONE	7.78	8.50	9842360	8694316	0.1054	0.1009
21) TM METHOXYCHLOR	7.45	8.15	4607207	4590014	0.1003	0.1015

Target Compounds

Data File : G:\LUCY\DATA\040804\0804006.D
Acq On : 8-4-04 17:13:29
Sample : OCL-3 8/2/04
Misc : WATER
Quant Method : G:\LUCY\DATA\040804\OCL.M

Vial: 6
Operator: SA
Inst : Lucy
Multiplier: 1.00



Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804007.D\ECD1A.CH Vial: 7
 Signal #2 : G:\LUCY\DATA\040804\0804007.D\ECD2B.CH
 Acq On : 8-4-04 17:28:04 Operator: SA
 Sample : OCL-4 6/3/04 Inst : Lucy
 Misc : WATER Multiplr: 1.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 13:12 2004 Quant Results File: OCL.RES

Quant Method : G:\LUCY\DATA\040804\OCL.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 11:03:57 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

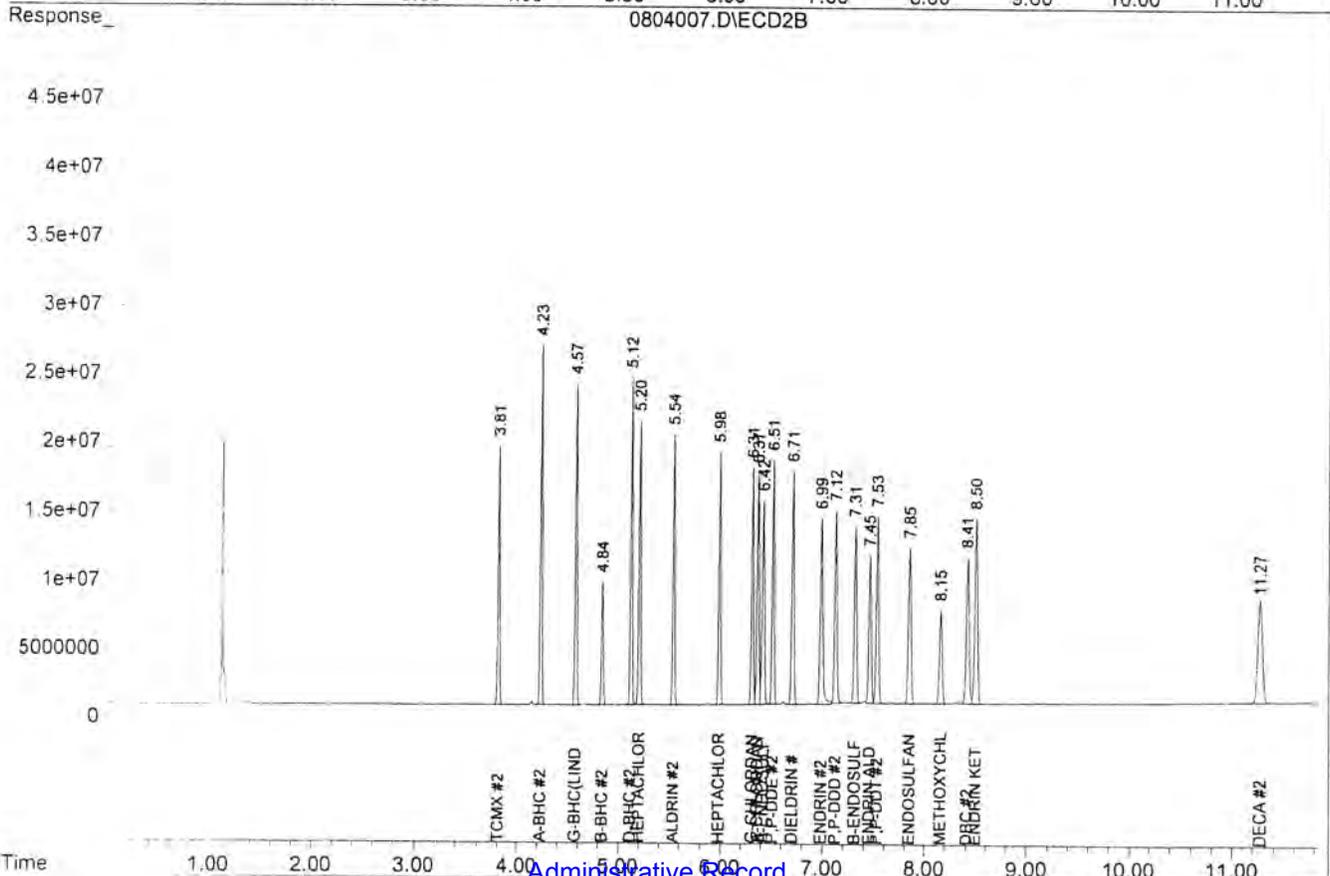
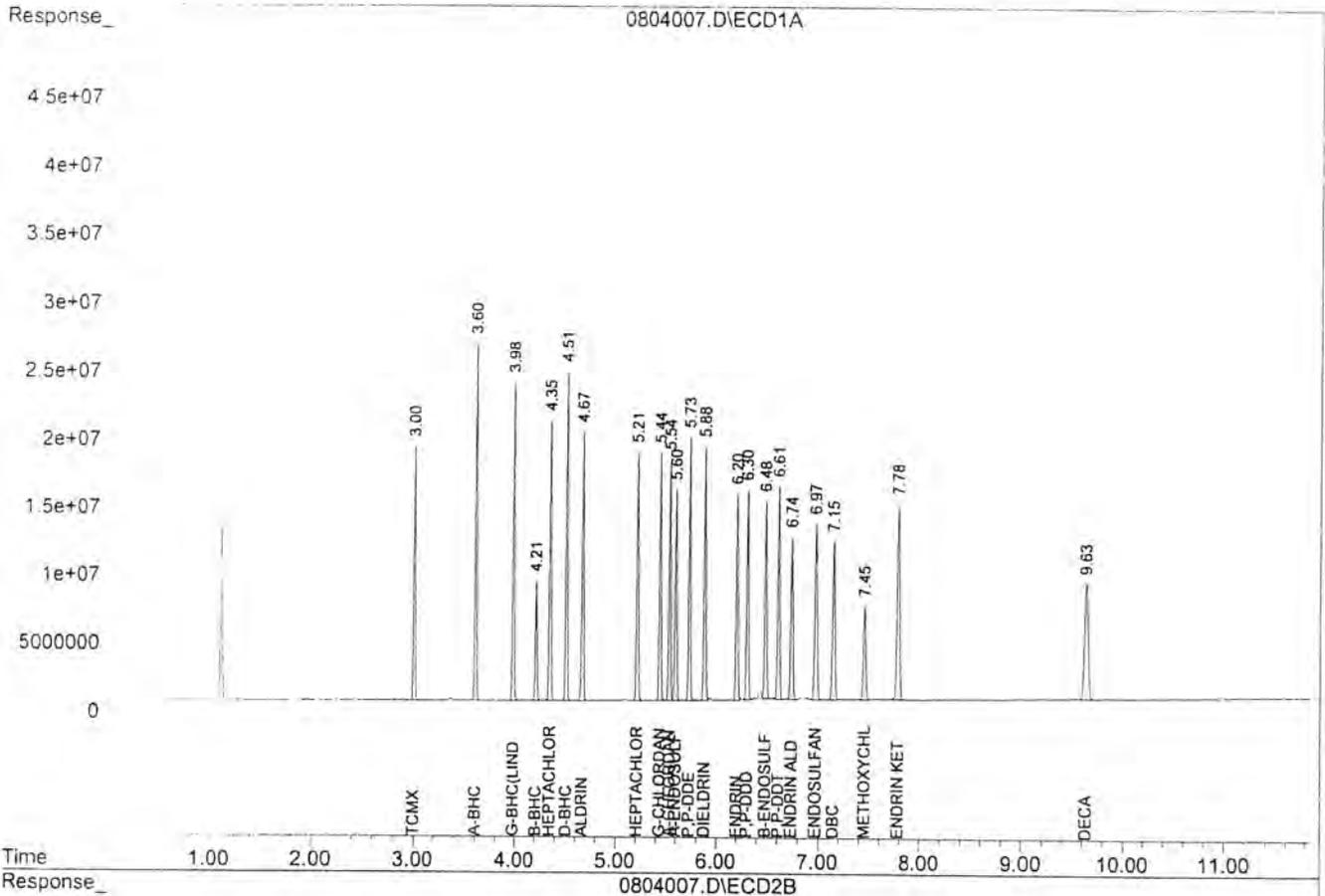
Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2
System Monitoring Compounds						
1) S TCMX	3.00	3.81	18664809	18864233	0.1546	0.1552
Surrogate Spike	0.150	Range	25 - 150	Recovery =	103.07%	103.47%
22) S DBC	7.15	8.41	11633762	10709663	0.1545	0.1562
Surrogate Spike	0.150			Recovery =	103.00%	104.13%
23) S DECA	9.63	11.27	8460391	7562429	0.1417	0.1429
Surrogate Spike	0.150	Range	25 - 150	Recovery =	94.47%	95.27%
Target Compounds						
2) TM A-BHC	3.60	4.23	26214871	26171904	0.1653	0.1630
3) TM B-BHC	4.21	4.84	8715927	8981621	0.1489	0.1508
1) M G-BHC (LINDANE)	3.98	4.57	23391104	23398930	0.1612	0.1620
7) TM D-BHC	4.51	5.12	24174909	23833975	0.1650	0.1619
6) M HEPTACHLOR	4.35	5.20	20573427	20674847	0.1559	0.1562
7) M ALDRIN	4.67	5.54	19745143	19674941	0.1610	0.1587
8) TM HEPTACHLOR EPOXI	5.21	5.98	18241764	18403280	0.1548	0.1543
9) TM G-CHLORDANE	5.44	6.31	18214381	17287656	0.1563	0.1543
10) TM A-ENDOSULFAN	5.60	6.42	15491768	14857727	0.1536	0.1551
11) TM A-CHLORDANE	5.54	6.37	17707445	16898483	0.1556	0.1550
12) TM P,P-DDE	5.73	6.51	19330745	17801991	0.1639	0.1610
13) M DIELDRIN	5.88	6.71	18649532	16985911	0.1564	0.1568
14) M ENDRIN	6.20	6.99	15180740	13575776	0.1591	0.1497
15) TM B-ENDOSULFAN	6.48	7.31	14504100	12882585	0.1434	0.1552
16) TM P,P-DDD	6.30	7.12	15410356	14033398	0.1587	0.1551
17) TM ENDRIN ALDEHYDE	6.74	7.45	11918724	10784444	0.1607	0.1583
18) M P,P-DDT	6.61	7.53	15640168	13679328	0.1608	0.1584
19) TM ENDOSULFAN SULFA	6.97	7.85	12908558	11417189	0.1563	0.1516
20) TM ENDRIN KETONE	7.78	8.50	14365941	13501267	0.1538	0.1567
21) TM METHOXYCHLOR	7.45	8.15	6861687	6831569	0.1493	0.1510

Target Compounds

Data File : G:\LUCY\DATA\040804\0804007.D
Acq On : 8-4-04 17:28:04
Sample : OCL-4 6/3/04
Misc : WATER
Quant Method : G:\LUCY\DATA\040804\OCL.M

Vial: 7
Operator: SA
Inst : Lucy
Multiplr: 1.00



Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804008.D\ECD1A.CH Vial: 8
 Signal #2 : G:\LUCY\DATA\040804\0804008.D\ECD2B.CH
 Acq On : 8-4-04 17:42:39 Operator: SA
 Sample : OCL-5 8/2/04 Inst : Lucy
 Misc : WATER Multiplr: 1.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 13:12 2004 Quant Results File: OCL.RES

Quant Method : G:\LUCY\DATA\040804\OCL.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 11:03:57 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

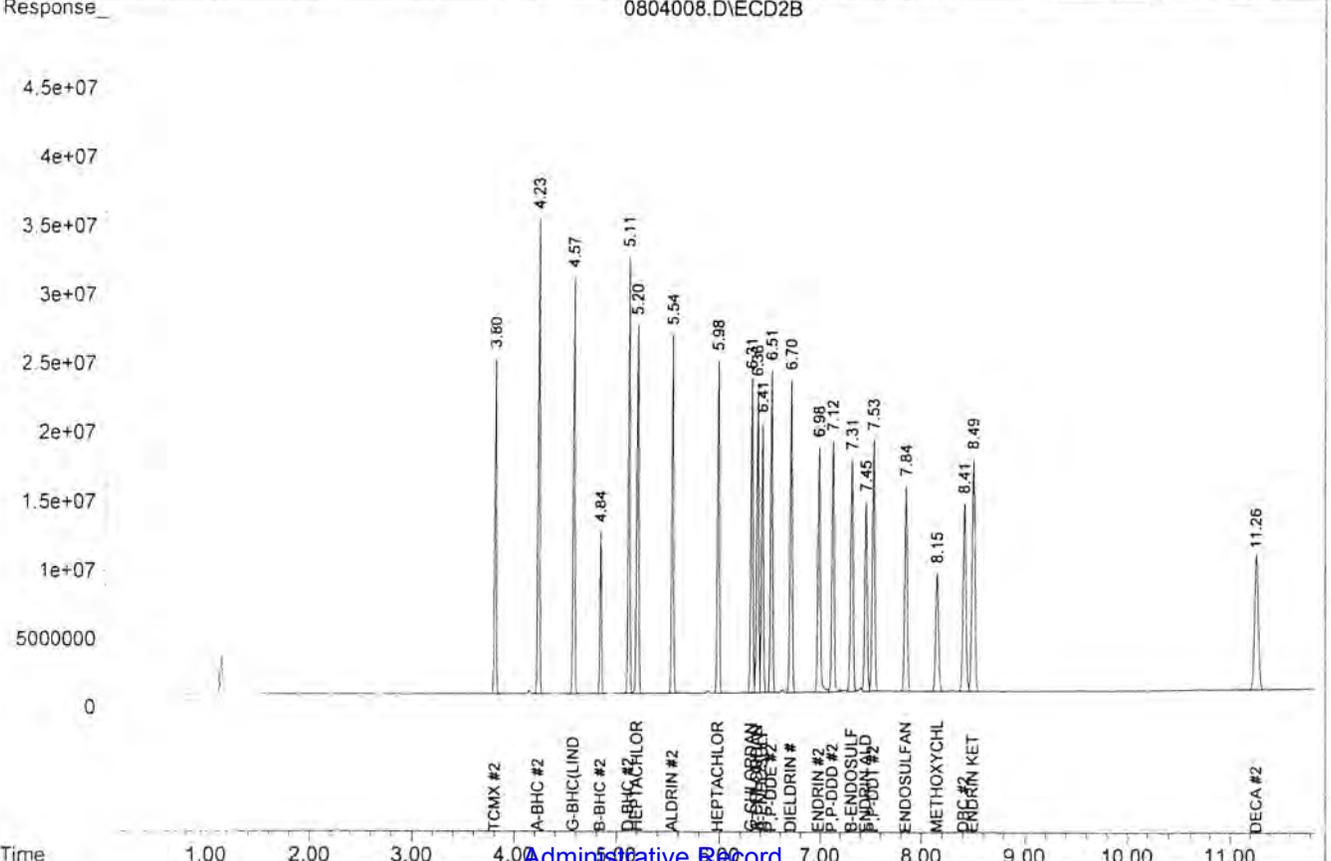
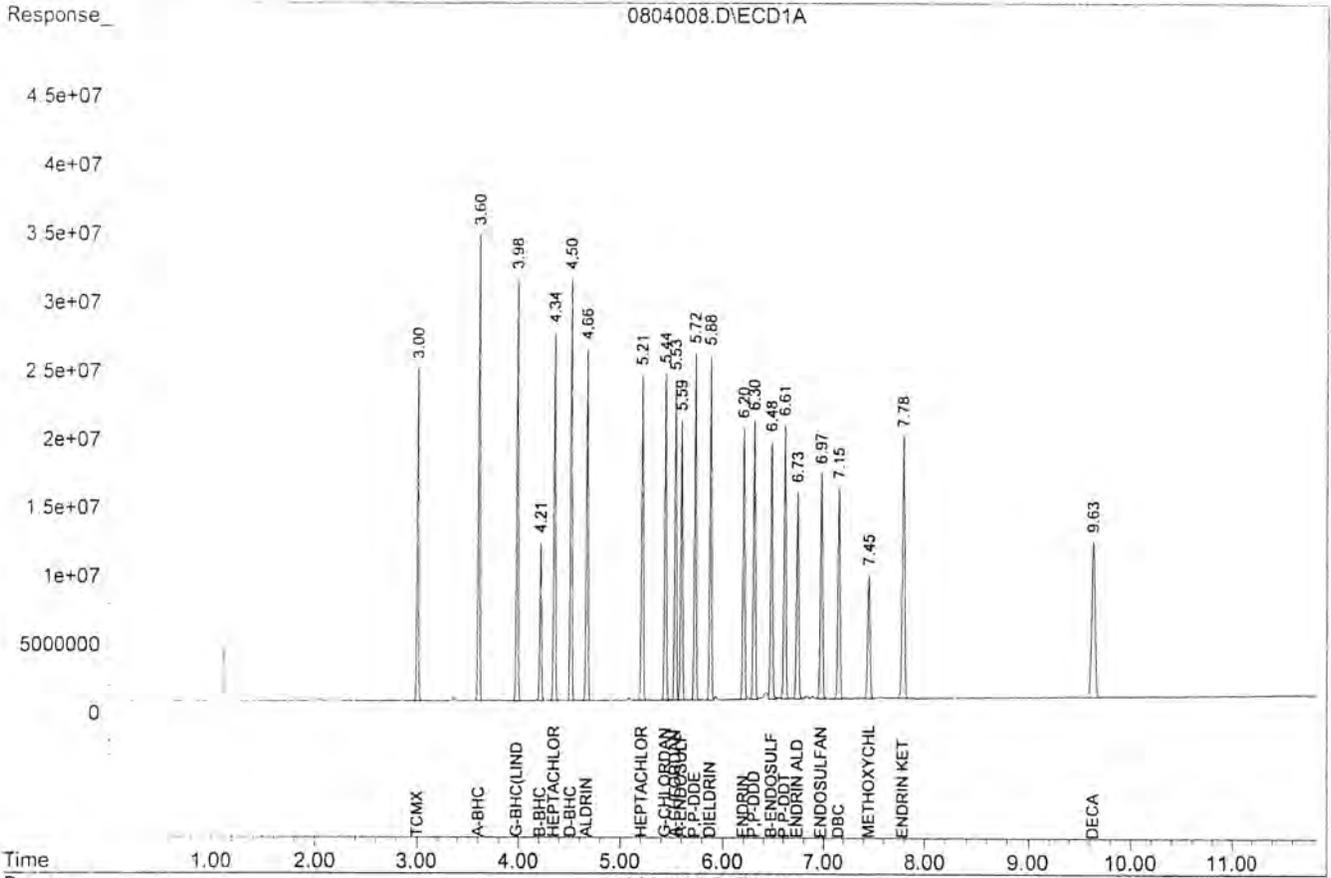
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2
System Monitoring Compounds						
1) S TCMX	3.00	3.80	24294028	24492798	0.2012	0.2016
Surrogate Spike	0.150	Range	25 - 150	Recovery =	134.13%	134.40%
22) S DBC	7.15	8.41	15380266	13749794	0.2042	0.2006
Surrogate Spike	0.150			Recovery =	136.13%	133.73%
23) S DECA	9.63	11.26	11343073	9970221	0.1899	0.1884
Surrogate Spike	0.150	Range	25 - 150	Recovery =	126.60%	125.60%
Target Compounds						
2) TM A-BHC	3.60	4.23	33993505	34580018	0.2144	0.2154
3) TM B-BHC	4.21	4.84	11546298	11841531	0.1973	0.1989
4) M G-BHC (LINDANE)	3.98	4.57	30817567	30330004	0.2124	0.2100
5) TM D-BHC	4.50	5.11	30767702	31797301	0.2101	0.2161
6) M HEPTACHLOR	4.34	5.20	26889256	26873880	0.2038	0.2031
7) M ALDRIN	4.66	5.54	25686581	26120331	0.2095	0.2107
8) TM HEPTACHLOR EPOXI	5.21	5.98	23760660	24244291	0.2016	0.2032
9) TM G-CHLORDANE	5.44	6.31	23918856	22902880	0.2052	0.2044
10) TM A-ENDOSULFAN	5.59	6.41	20425694	19719322	0.2025	0.2058
11) TM A-CHLORDANE	5.53	6.36	23397435	22346767	0.2056	0.2050
12) TM P,P-DDE	5.72	6.51	25349676	23511939	0.2149	0.2126
13) M DIELDRIN	5.88	6.70	25195082	22798050	0.2113	0.2105
14) M ENDRIN	6.20	6.98	19868585	17908509	0.2083	0.1990
15) TM B-ENDOSULFAN	6.48	7.31	18832495	16908673	0.1862	0.2037
16) TM P,P-DDD	6.30	7.12	20400991	18308436	0.2101	0.2024
17) TM ENDRIN ALDEHYDE	6.73	7.45	15101436	13870474	0.2036	0.2035
18) M P,P-DDT	6.61	7.53	19960774	18355423	0.2053	0.2126
19) TM ENDOSULFAN SULFA	6.97	7.84	16459755	15013340	0.1993	0.1994
20) TM ENDRIN KETONE	7.78	8.49	19095682	16975508	0.2045	0.1970
21) TM METHOXYCHLOR	7.45	8.15	9012385	8703222	0.1961	0.1924

Target Compounds

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\040804\0804008.D
Acq On : 8-4-04 17:42:39
Sample : OCL-5 8/2/04
Misc : WATER
Quant Method : G:\LUCY\DATA\040804\OCL.M

Vial: 8
Operator: SA
Inst : Lucy
Multiplr: 1.00



Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804009.D\ECD1A.CH Vial: 9
 Signal #2 : G:\LUCY\DATA\040804\0804009.D\ECD2B.CH
 Acq On : 8-4-04 17:57:13 Operator: SA
 Sample : OCL-6 8/2/04 Inst : Lucy
 Misc : WATER Multiplr: 1.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 13:13 2004 Quant Results File: OCL.RES

Quant Method : G:\LUCY\DATA\040804\OCL.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 11:03:57 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2
System Monitoring Compounds						
1) S TCMX	3.00	3.80	31118939	30539250	0.2577	0.2513
Surrogate Spike	0.150	Range	25 - 150	Recovery =	171.80%#	167.53%#
22) S DBC	7.15	8.41	19524092	17448547	0.2592	0.2545
Surrogate Spike	0.150			Recovery =	172.80%	169.67%
23) S DECA	9.63	11.26	14618901	12189221	0.2448	0.2303
Surrogate Spike	0.150	Range	25 - 150	Recovery =	163.20%#	153.53%#
Target Compounds						
2) TM A-BHC	3.60	4.23	43708368	43271855	0.2757	0.2695
3) TM B-BHC	4.21	4.84	14683295	14833128	0.2509	0.2491
4) M G-BHC (LINDANE)	3.98	4.57	39151695	37538873	0.2699	0.2599
) TM D-BHC	4.50	5.12	40288097	39502812	0.2751	0.2684
e) M HEPTACHLOR	4.34	5.20	33947270	33956681	0.2573	0.2566
7) M ALDRIN	4.66	5.54	33017232	32114104	0.2692	0.2591
8) TM HEPTACHLOR EPOXI	5.21	5.98	30316456	29376127	0.2573	0.2463
9) TM G-CHLORDANE	5.44	6.31	30697425	29037863	0.2633	0.2592
10) TM A-ENDOSULFAN	5.59	6.41	25652278	24276348	0.2544	0.2534
11) TM A-CHLORDANE	5.53	6.36	29381693	27461046	0.2582	0.2519
12) TM P,P-DDE	5.72	6.51	32199747	29511482	0.2730	0.2668
13) M DIELDRIN	5.88	6.70	31549721	28561032	0.2646	0.2637
14) M ENDRIN	6.20	6.98	25007292	22553885	0.2621	0.2519
15) TM B-ENDOSULFAN	6.48	7.31	23844861	20735172	0.2357	0.2498
16) TM P,P-DDD	6.30	7.12	25836101	23334360	0.2660	0.2579
17) TM ENDRIN ALDEHYDE	6.73	7.45	19205806	17409805	0.2590	0.2555
18) M P,P-DDT	6.61	7.53	25888514	22683052	0.2662	0.2627
19) TM ENDOSULFAN SULFA	6.97	7.84	21123606	18810748	0.2557	0.2498
20) TM ENDRIN KETONE	7.78	8.50	23511399	21546432	0.2518	0.2501
21) TM METHOXYCHLOR	7.45	8.15	11357911	10886323	0.2471	0.2406

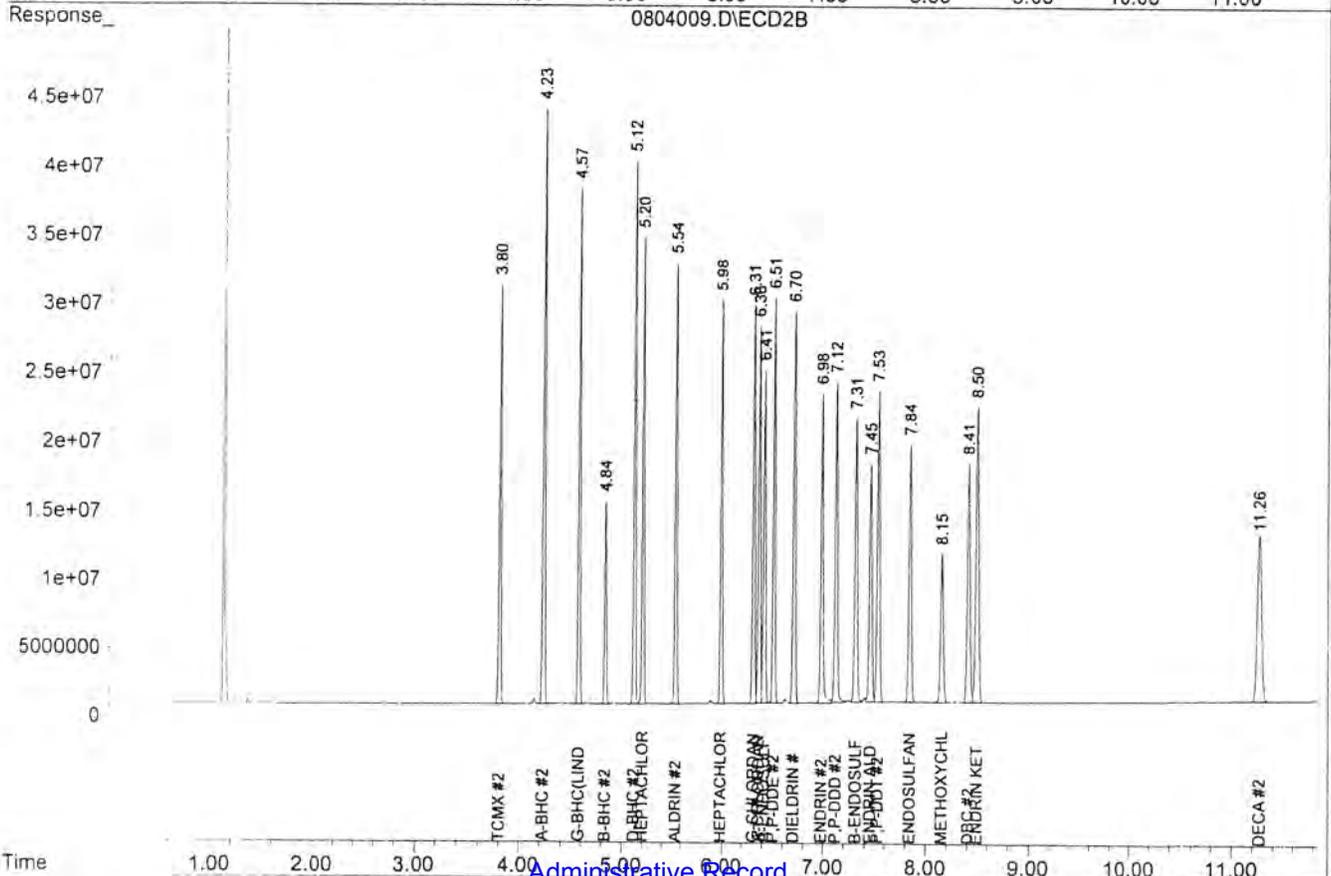
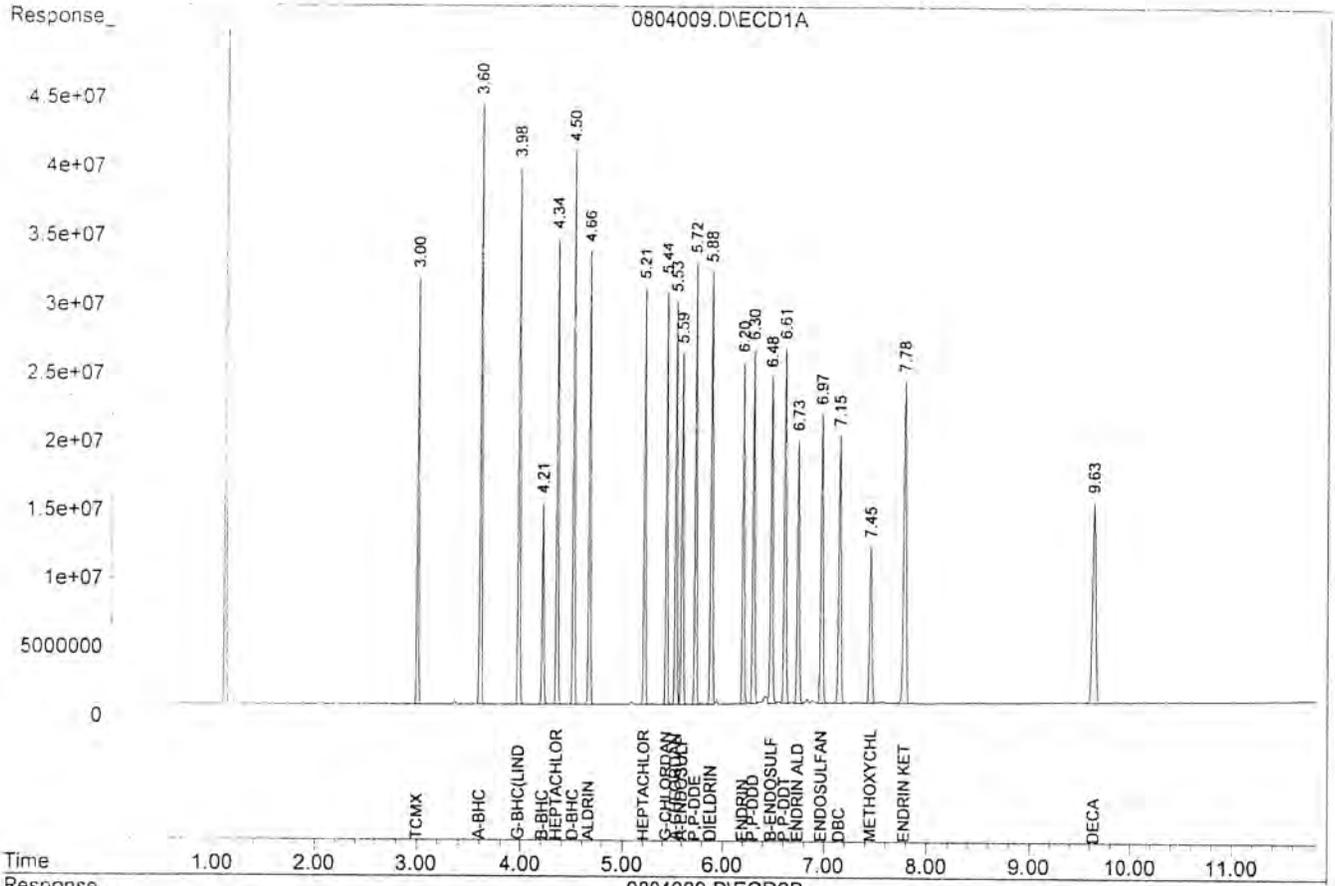
Target Compounds

Quantitation Report

(Not Reviewed)

Data File : G:\LUCY\DATA\040804\0804009.D
Acq On : 8-4-04 17:57:13
Sample : OCL-6 8/2/04
Misc : WATER
Quant Method : G:\LUCY\DATA\040804\OCL.M

Vial: 9
Operator: SA
Inst : Lucy
Multiplr: 1.00



Organochlorine Pesticides Analysis by
EPA Method 608/8081

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No: _____
Matrix: Water

SDG No: 45039
Date Analyzed: 8/5/04
Instrument: Lucy
Initial Cal. Date: 8/4/04
Data File: 0804044.D

		Compound	MEAN	CCRF	%D	%Drift	
1	S	TCMX	120768000	132228000	9.5	S	
2	TM	A-BHC	158551000	184222000	16	TM	#
3	TM	B-BHC	58533700	61364800	4.8	TM	
4	M	G-BHC(LINDANE)	145076000	163731000	13	M	
5	TM	D-BHC	146470000	170237000	16	TM	#
6	M	HEPTACHLOR	131940000	141941000	7.6	M	
7	M	ALDRIN	122628000	138052000	13	M	
8	TM	HEPTACHLOR EPOXIDE	117837000	127832000	8.5	TM	
9	TM	G-CHLORDANE	116570000	127663000	9.5	TM	
10	TM	A-ENDOSULFAN	100845000	109721000	8.8	TM	
11	TM	A-CHLORDANE	113799000	125298000	10	TM	
12	TM	P,P-DDE	117966000	132568000	12	TM	
13	M	DIELDRIN	119257000	130678000	9.6	M	
14	M	ENDRIN	95399500	102766000	7.7	M	
15	TM	B-ENDOSULFAN	101160000	98929200	2.2	TM	
16	TM	P,P-DDD	97122600	106235000	9.4	TM	
17	TM	ENDRIN ALDEHYDE	74160300	78360400	5.7	TM	
18	M	P,P-DDT	97247200	104964000	7.9	M	
19	TM	ENDOSULFAN SULFATE	82604600	88547400	7.2	TM	
20	TM	ENDRIN KETONE	93388600	101951000	9.2	TM	
21	TM	METHOXYCHLOR	45956600	45940900	0.03	TM	
22	S	DBC	75323100	79035500	4.9	S	
23	S	DECA	59721400	59421000	0.50	S	
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							

Average

8.4

Organochlorine Pesticides Analysis by
EPA Method 608/8081

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No: _____
Matrix: Water

SDG No: 45039
Date Analyzed: 8/5/04
Instrument: Lucy
Cal. Date: 8/4/04
Data File: 0804044.D

		Compound	MEAN	CCRF	%D	%Drift
41	S	TCMX	121512000	126923000	4.5	S
42	TM	A-BHC	160551000	179240000	12	TM
43	TM	B-BHC	59542400	61932900	4.0	TM
44	M	G-BHC(LINDANE)	144460000	156688000	8.5	M
45	TM	D-BHC	147170000	164869000	12	TM
46	M	HEPTACHLOR	132336000	139804000	5.6	M
47	M	ALDRIN	123944000	137147000	11	M
48	TM	HEPTACHLOR EPOXIDE	119291000	124244000	4.2	TM
49	TM	G-CHLORDANE	112042000	119398000	6.6	TM
50	TM	A-ENDOSULFAN	95806000	100440000	4.8	TM
51	TM	A-CHLORDANE	109005000	113168000	3.8	TM
52	TM	P,P-DDE	110606000	121149000	9.5	TM
53	M	DIELDRIN	108329000	114412000	5.6	M
54	ML	ENDRIN	128392000	90440500	30	ML 0.27
55	TM	B-ENDOSULFAN	83018200	87062000	4.9	TM
56	TM	P,P-DDD	90464900	95699100	5.8	TM
57	TM	ENDRIN ALDEHYDE	68147700	71774400	5.3	TM
58	M	P,P-DDT	86339100	92292700	6.9	M
59	TM	ENDOSULFAN SULFATE	75289100	77059100	2.4	TM
60	TM	ENDRIN KETONE	86164600	90867000	5.5	TM
61	TM	METHOXYCHLOR	45240800	44330600	2.0	TM
62	S	DBC	68550300	69073600	0.76	S
63	S	DECA	52933300	50500700	4.6	S
64						
65						
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79						
80						

Average

7.0

Signal #1 : G:\LUCY\DATA\040804\0804044.D\ECD1A.CH Vial: 44
 Signal #2 : G:\LUCY\DATA\040804\0804044.D\ECD2B.CH
 Acq On : 8-5-04 13:23:34 Operator: SA
 Sample : OCL-4 6/3/04 Inst : Lucy
 Misc : WATER Multiplr: 1.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 18:31 2004 Quant Results File: OCL.RES

Quant Method : G:\LUCY\DATA\040804\OCL.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 11:03:57 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

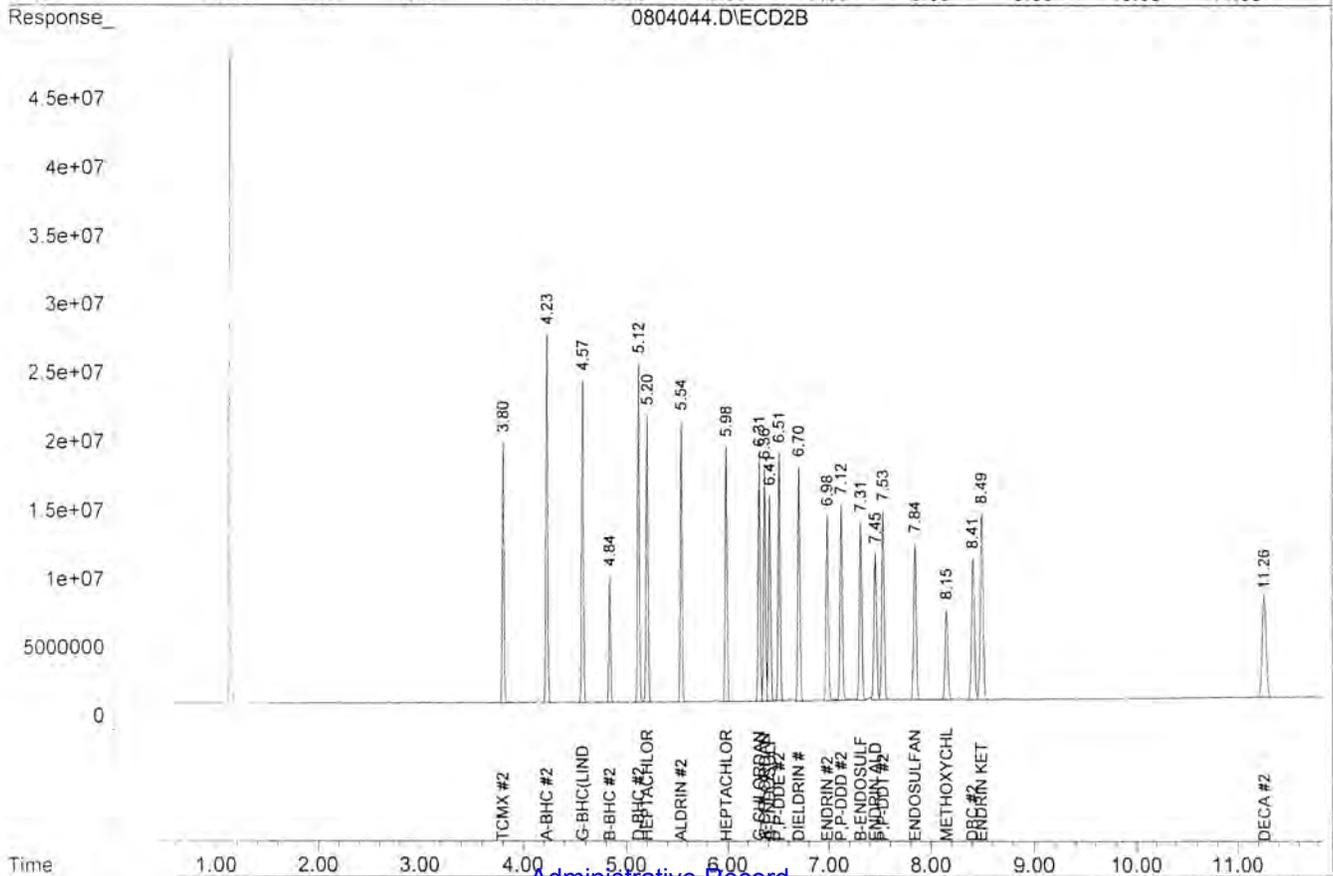
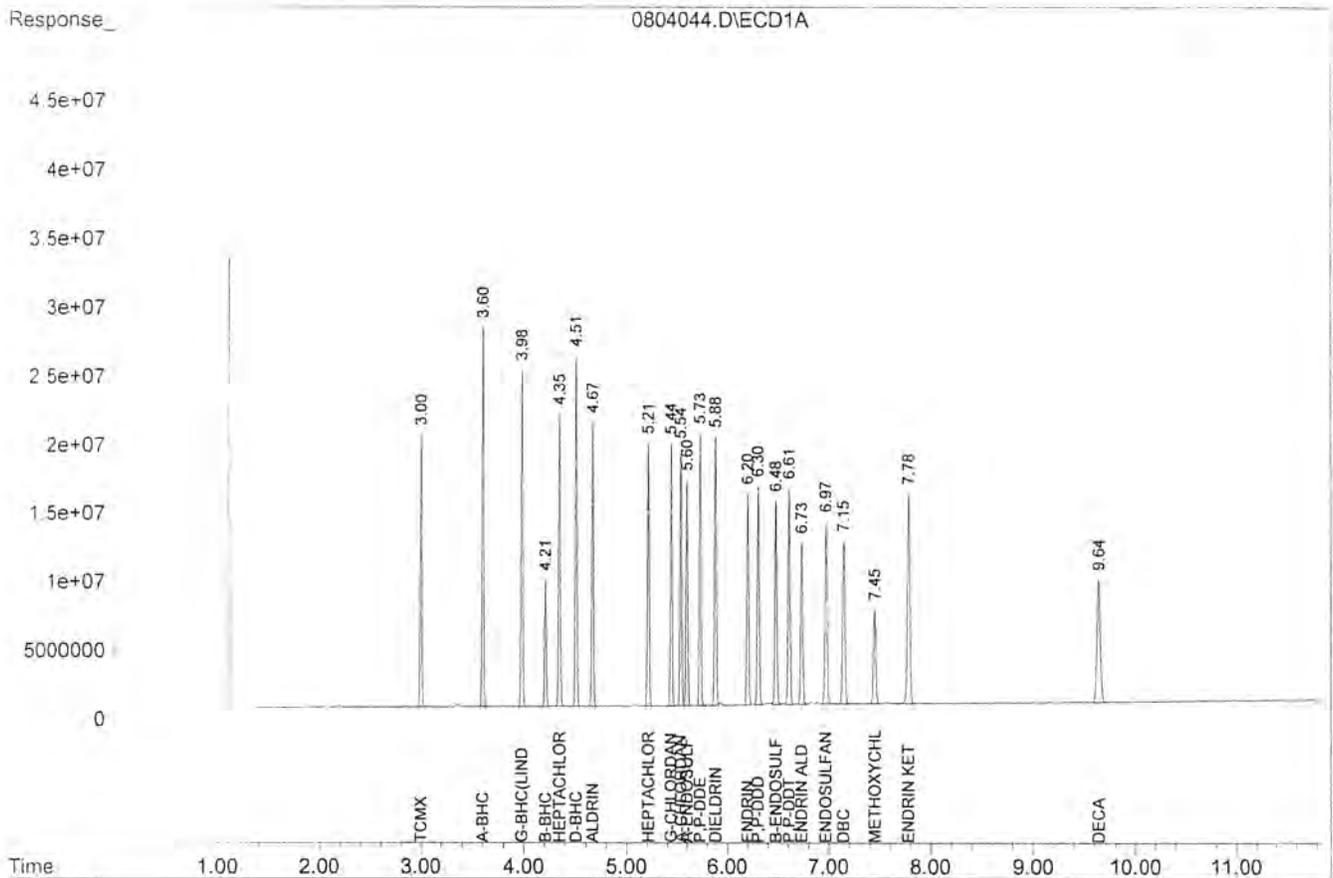
Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2
System Monitoring Compounds						
1) S TCMX	3.00	3.80	19834265	19038497	0.1642	0.1567
Surrogate Spike 0.150	Range 25 - 150		Recovery =		109.47%	104.47%
22) S DBC	7.15	8.41	11855324	10361043	0.1574	0.1511
Surrogate Spike 0.150	Range 25 - 150		Recovery =		104.93%	100.73%
23) S DECA	9.64	11.26	8913157	7575112	0.1492	0.1431
Surrogate Spike 0.150	Range 25 - 150		Recovery =		99.47%	95.40%
Target Compounds						
2) TM A-BHC	3.60	4.23	27633306	26886040	0.1743	0.1675
3) TM B-BHC	4.21	4.84	9204725	9289929	0.1573	0.1560
4) M G-BHC (LINDANE)	3.98	4.57	24559606	23503194	0.1693	0.1627
TM D-BHC	4.51	5.12	25535554	24730280	0.1743	0.1680
M HEPTACHLOR	4.35	5.20	21291142	20970619	0.1614	0.1585
7) M ALDRIN	4.67	5.54	20707863	20572046	0.1689	0.1660
8) TM HEPTACHLOR EPOXI	5.21	5.98	19174804	18636601	0.1627	0.1562
9) TM G-CHLORDANE	5.44	6.31	19149388	17909716	0.1643	0.1598
10) TM A-ENDOSULFAN	5.60	6.41	16458090	15065964	0.1632	0.1573
11) TM A-CHLORDANE	5.54	6.36	18794668	16975219	0.1652	0.1557
12) TM P,P-DDE	5.73	6.51	19885263	18172339	0.1686	0.1643
13) M DIELDRIN	5.88	6.70	19601645	17161837	0.1644	0.1584
14) M ENDRIN	6.20	6.98	15414963	13566080	0.1616	0.1496
15) TM B-ENDOSULFAN	6.48	7.31	14839382	13059298	0.1467	0.1573
16) TM P,P-DDD	6.30	7.12	15935238	14354860	0.1641	0.1587
17) TM ENDRIN ALDEHYDE	6.73	7.45	11754061	10766161	0.1585	0.1580
18) M P,P-DDT	6.61	7.53	15744673	13843900	0.1619	0.1603
19) TM ENDOSULFAN SULFA	6.97	7.84	13282111	11558865	0.1608	0.1535
20) TM ENDRIN KETONE	7.78	8.49	15292676	13630050	0.1638	0.1582
21) TM METHOXYCHLOR	7.45	8.15	6891140	6649586	0.1499	0.1470

Target Compounds

Data File : G:\LUCY\DATA\040804\0804044.D
Acq On : 8-5-04 13:23:34
Sample : OCL-4 6/3/04
Misc : WATER
Quant Method : G:\LUCY\DATA\040804\OCL.M

Vial: 44
Operator: SA
Inst : Lucy
Multiplr: 1.00



Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804050.D\ECD1A.CH Vial: 50
 Signal #2 : G:\LUCY\DATA\040804\0804050.D\ECD2B.CH
 Acq On : 8-5-04 14:51:57 Operator: SA
 Sample : PYRTH2-1 7/2/04 Inst : Lucy
 Misc : WATER Multiplr: 1.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 18:39 2004 Quant Results File: PPTH.RES

Quant Method : G:\LUCY\DATA\040804\PPTH.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 16:39:19 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

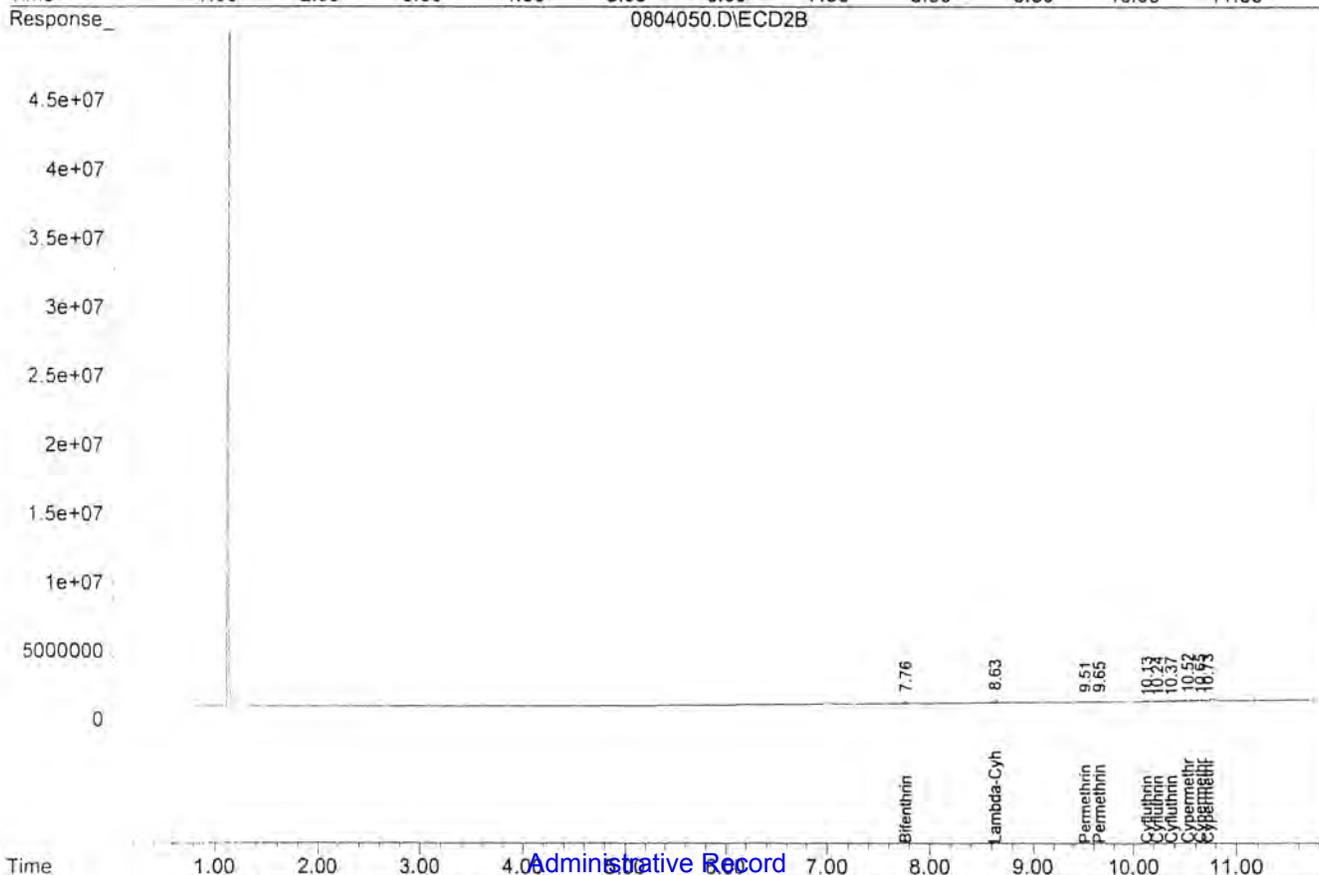
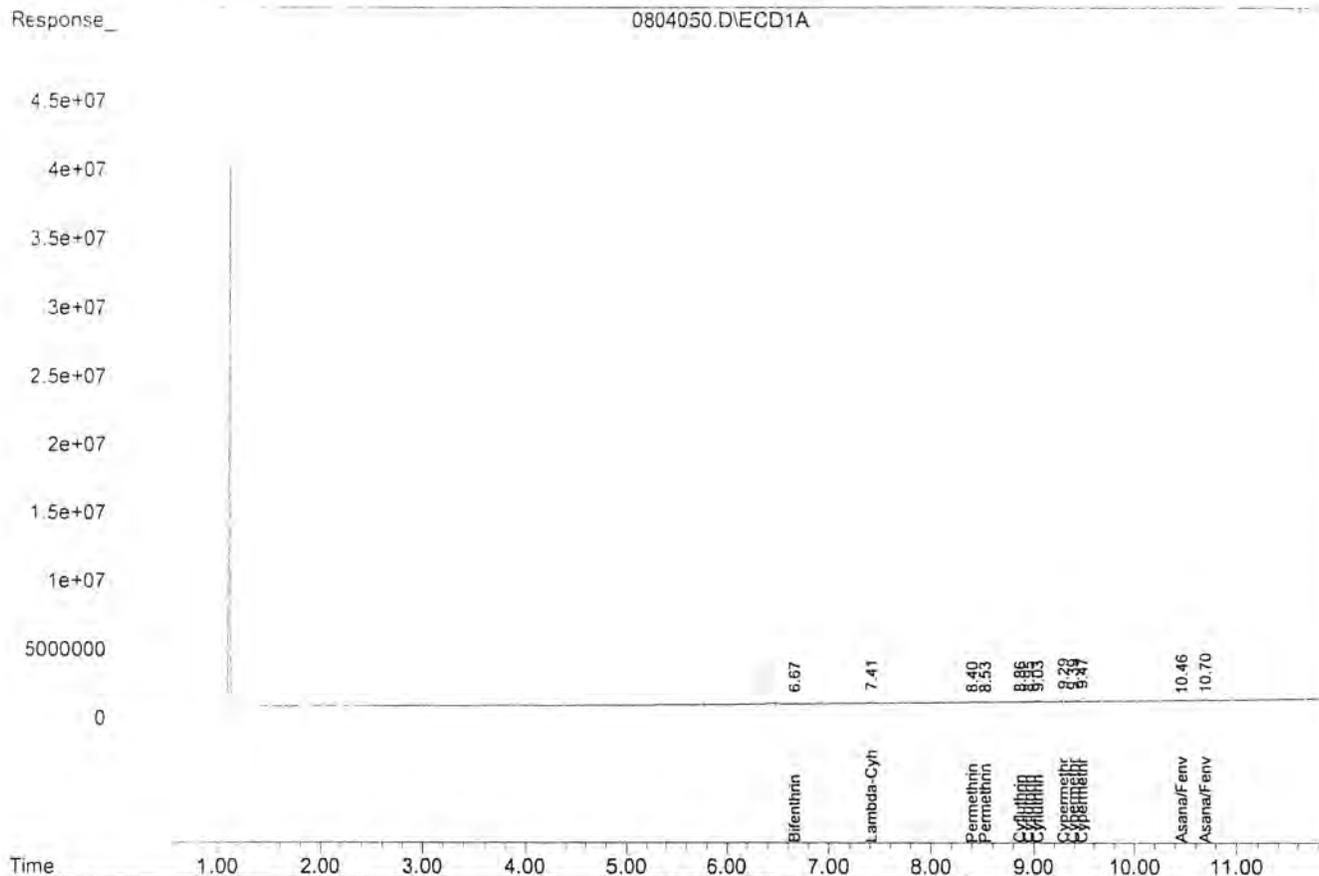
Compound	RT#1	RT#2	Resp#1	Resp#2	t#1	t#2
Target Compounds						
1) Bifenthrin	6.67	7.76	165269	155949	0.0061	0.0059
2) Lambda-Cyhalothr	7.41	8.63	265260	235059	0.0049	0.0048
3) Permethrin 1	8.40	9.51	35621	30820	0.0058	0.0053
4) Permethrin 2	8.53	9.65	25033	20807	0.0057	0.0053
5) Cyfluthrin 1	8.86	10.13	49322	37215	0.0053	0.0045
6) Cyfluthrin 2	8.95	10.24	59322	47498	0.0048	0.0042
7) Cyfluthrin 3	9.03	10.37	76111	37660	0.0049	0.0044
8) Cypermethrin 1	9.29	10.52	225775	216931	0.0253	0.0271
9) Cypermethrin 2	9.39	10.65	190468	170245	0.0242	0.0243
10) Cypermethrin 3	9.47	10.73	245500	177065	0.0248	0.0258
11) Asana/Fenvalerat	10.46	0.00	110990	0	0.0049	N.D. #
) Asana/Fenvalerat	10.70	0.00	186514	0	0.0051	N.D. #

Target Compounds

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\040804\0804050.D
 Acq On : 8-5-04 14:51:57
 Sample : PYRTH2-1 7/2/04
 Misc : WATER
 Quant Method : G:\LUCY\DATA\040804\PRTH.M

Vial: 50
 Operator: SA
 Inst : Lucy
 Multiplr: 1.00



Administrative Record
 Page 8663

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804051.D\ECD1A.CH Vial: 51
 Signal #2 : G:\LUCY\DATA\040804\0804051.D\ECD2B.CH
 Acq On : 8-5-04 15:06:39 Operator: SA
 Sample : PYRTH2-2 7/2/04 Inst : Lucy
 Misc : WATER Multiplr: 1.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 18:39 2004 Quant Results File: PRTH.RES

Quant Method : G:\LUCY\DATA\040804\PRTH.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 16:39:19 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	t#1	t#2
Target Compounds						
1) Bifenthrin	6.67	7.76	769813	742049	0.0282	0.0283
2) Lambda-Cyhalothr	7.41	8.63	1348966	1281340	0.0251	0.0260
3) Permethrin 1	8.40	9.51	171795	160914	0.0278	0.0278
4) Permethrin 2	8.52	9.65	116237	101840	0.0265	0.0257
5) Cyfluthrin 1	8.86	10.13	229449	216084	0.0247	0.0261
6) Cyfluthrin 2	8.95	10.24	315657	297006	0.0254	0.0262
7) Cyfluthrin 3	9.03	10.37	388912	217031	0.0250	0.0251
8) Cypermethrin 1	9.29	10.52	1158259	1030632	0.1298	0.1289
9) Cypermethrin 2	9.39	10.65	1033579	919811	0.1314	0.1315
10) Cypermethrin 3	9.47	10.73	1256375	890784	0.1271	0.1298
Asana/Fenvalerat	10.46	0.00	573565	0	0.0254	N.D. #
Asana/Fenvalerat	10.70	0.00	910508	0	0.0251	N.D. #

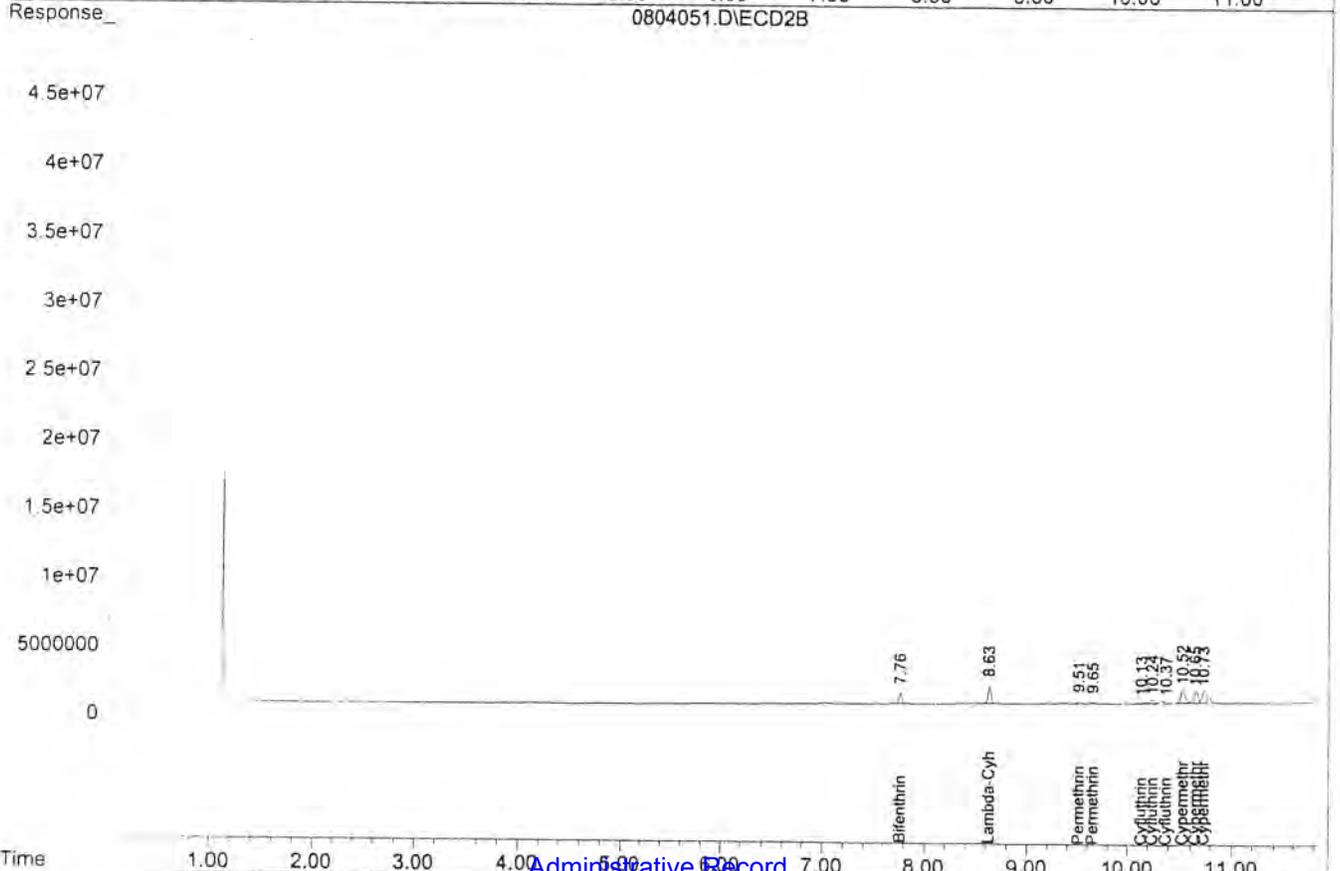
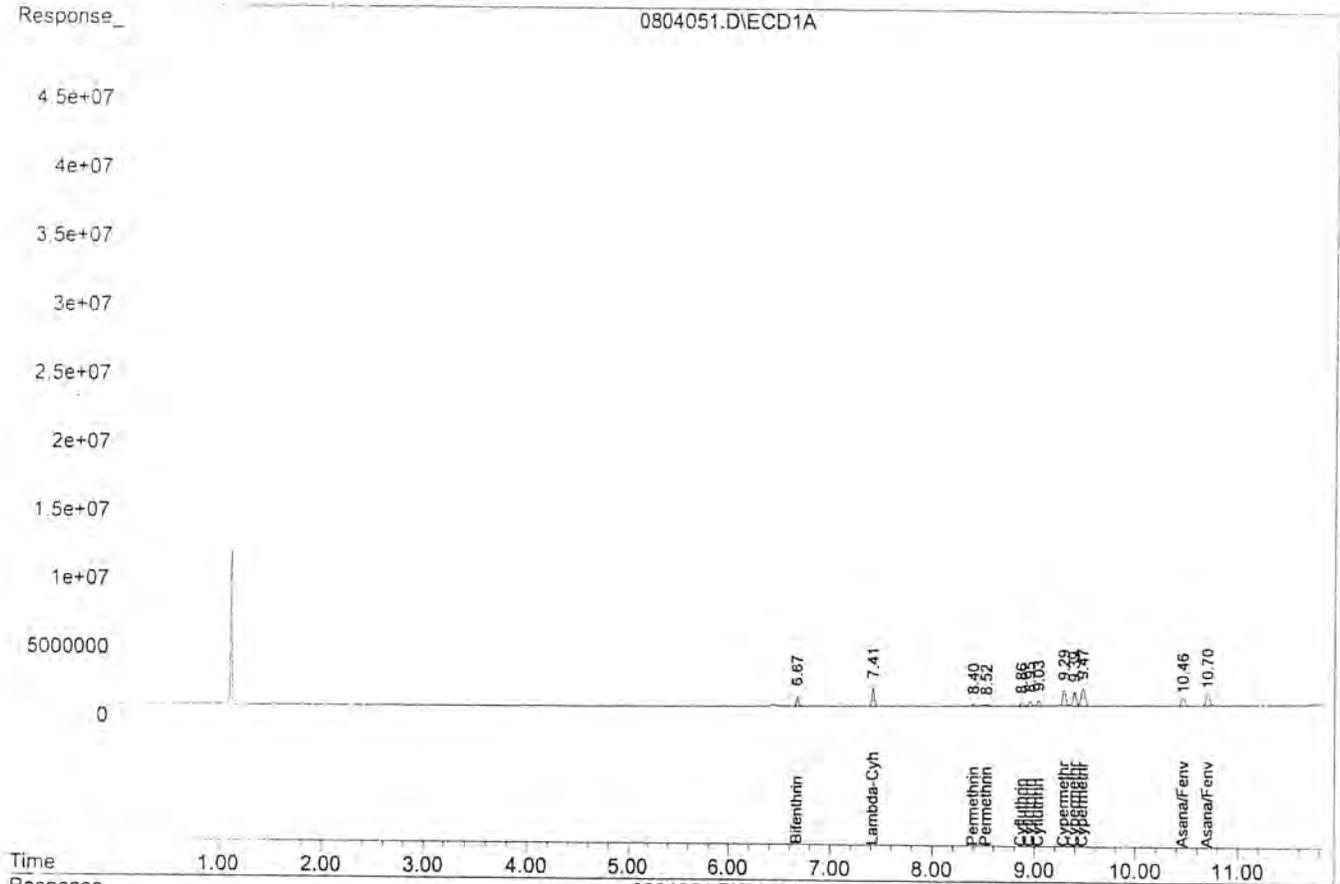
Target Compounds

Quantitation Report

(Not Reviewed)

Data File : G:\LUCY\DATA\040804\0804051.D
Acq On : 8-5-04 15:06:39
Sample : PYRTH2-2 7/2/04
Misc : WATER
Quant Method : G:\LUCY\DATA\040804\PRTH.M

Vial: 51
Operator: SA
Inst : Lucy
Multiplr: 1.00



Administrative Record
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Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804052.D\ECD1A.CH Vial: 52
 Signal #2 : G:\LUCY\DATA\040804\0804052.D\ECD2B.CH
 Acq On : 8-5-04 15:21:27 Operator: SA
 Sample : PYRTH2-3 7/2/04 Inst : Lucy
 Misc : WATER Multiplr: 1.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 18:39 2004 Quant Results File: PPTH.RES

Quant Method : G:\LUCY\DATA\040804\PPTH.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 16:39:19 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

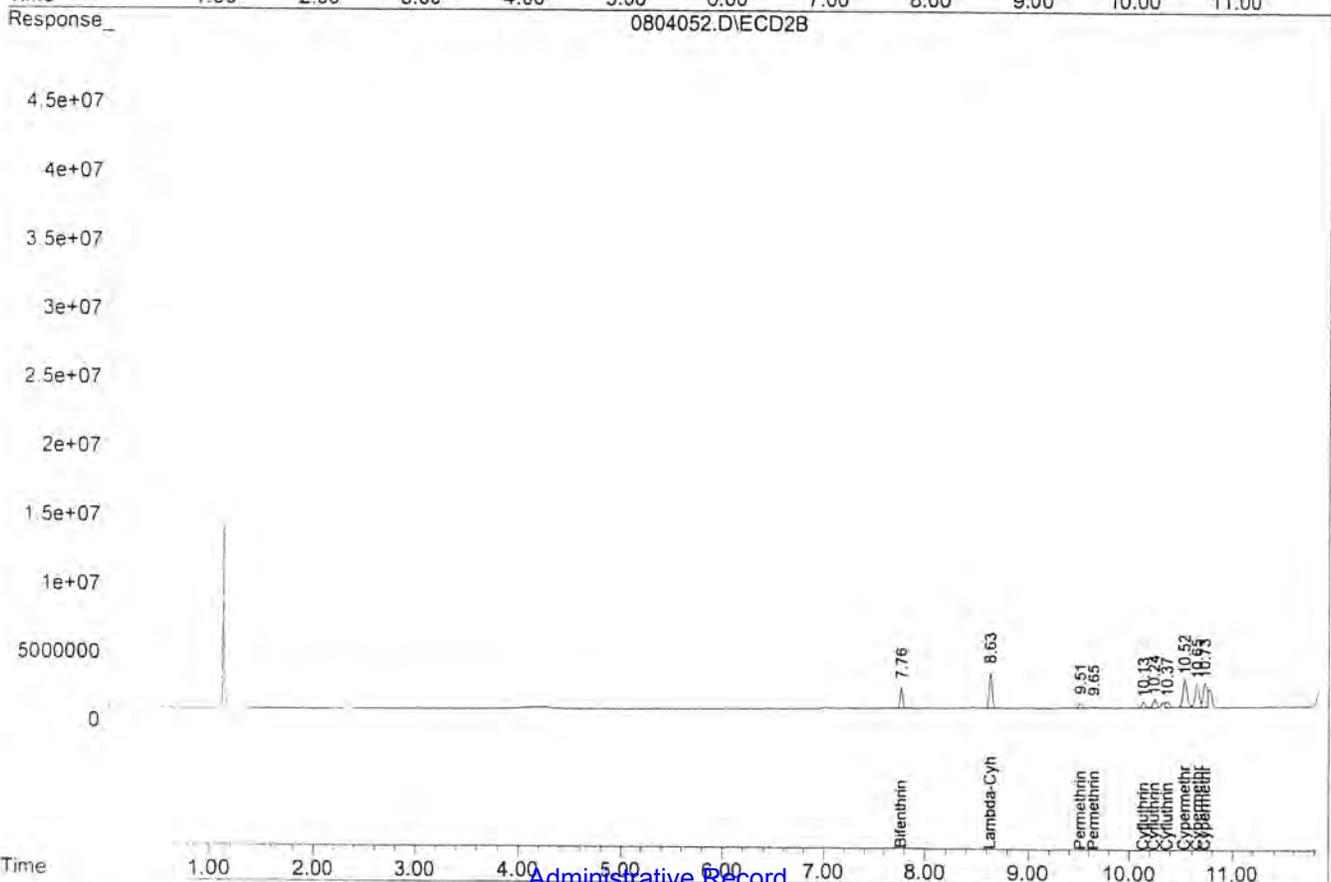
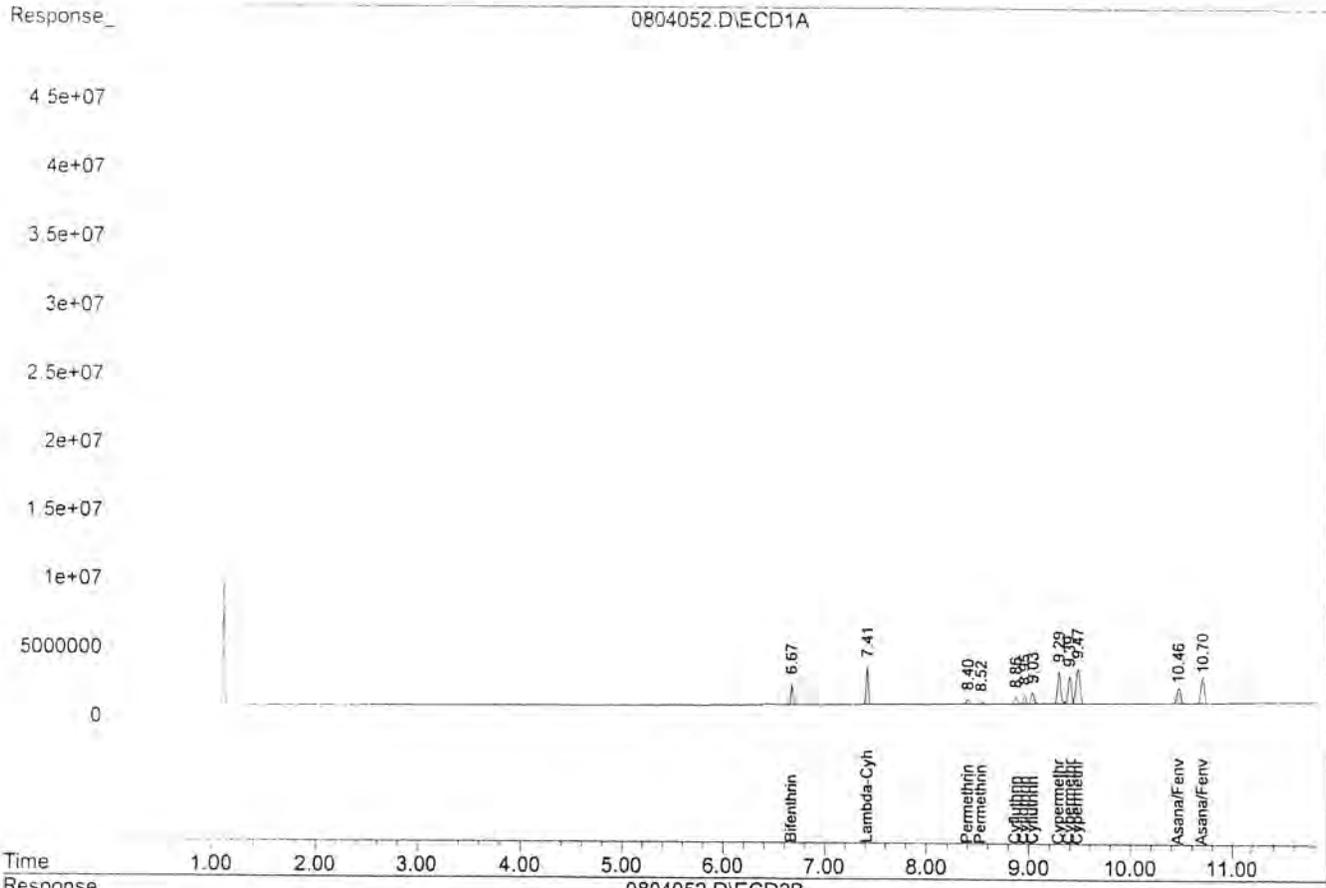
Compound	RT#1	RT#2	Resp#1	Resp#2	t#1	t#2
Target Compounds						
1) Bifenthrin	6.67	7.76	1517513	1452126	0.0556	0.0553
2) Lambda-Cyhalothr	7.41	8.63	2733195	2571109	0.0508	0.0522
3) Permethrin 1	8.40	9.51	323804	318057	0.0523	0.0549
4) Permethrin 2	8.52	9.65	221546	210746	0.0505	0.0532
5) Cyfluthrin 1	8.86	10.13	467047	441034	0.0502	0.0533
6) Cyfluthrin 2	8.95	10.24	661139	589800	0.0531	0.0521
7) Cyfluthrin 3	9.03	10.37	800293	455474	0.0515	0.0526
8) Cypermethrin 1	9.29	10.52	2307113	2046797	0.2585	0.2560
9) Cypermethrin 2	9.39	10.65	1975178	1752466	0.2510	0.2506
10) Cypermethrin 3	9.47	10.73	2568948	1787710	0.2598	0.2605
11) Asana/Fenvalerat	10.46	0.00	1128644	0	0.0500	N.D. #
Asana/Fenvalerat	10.70	0.00	1844337	0	0.0507	N.D. #

Target Compounds

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\040804\0804052.D
 Acq On : 8-5-04 15:21:27
 Sample : PYRTH2-3 7/2/04
 Misc : WATER
 Quant Method : G:\LUCY\DATA\040804\PRTH.M

Vial: 52
 Operator: SA
 Inst : Lucy
 Multiplr: 1.00



Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804053.D\ECD1A.CH Vial: 53
 Signal #2 : G:\LUCY\DATA\040804\0804053.D\ECD2B.CH
 Acq On : 8-5-04 15:36:07 Operator: SA
 Sample : PYRTH2-4 7/2/04 Inst : Lucy
 Misc : WATER Multiplr: 1.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 18:40 2004 Quant Results File: PPTH.RES

Quant Method : G:\LUCY\DATA\040804\PPTH.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 16:39:19 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

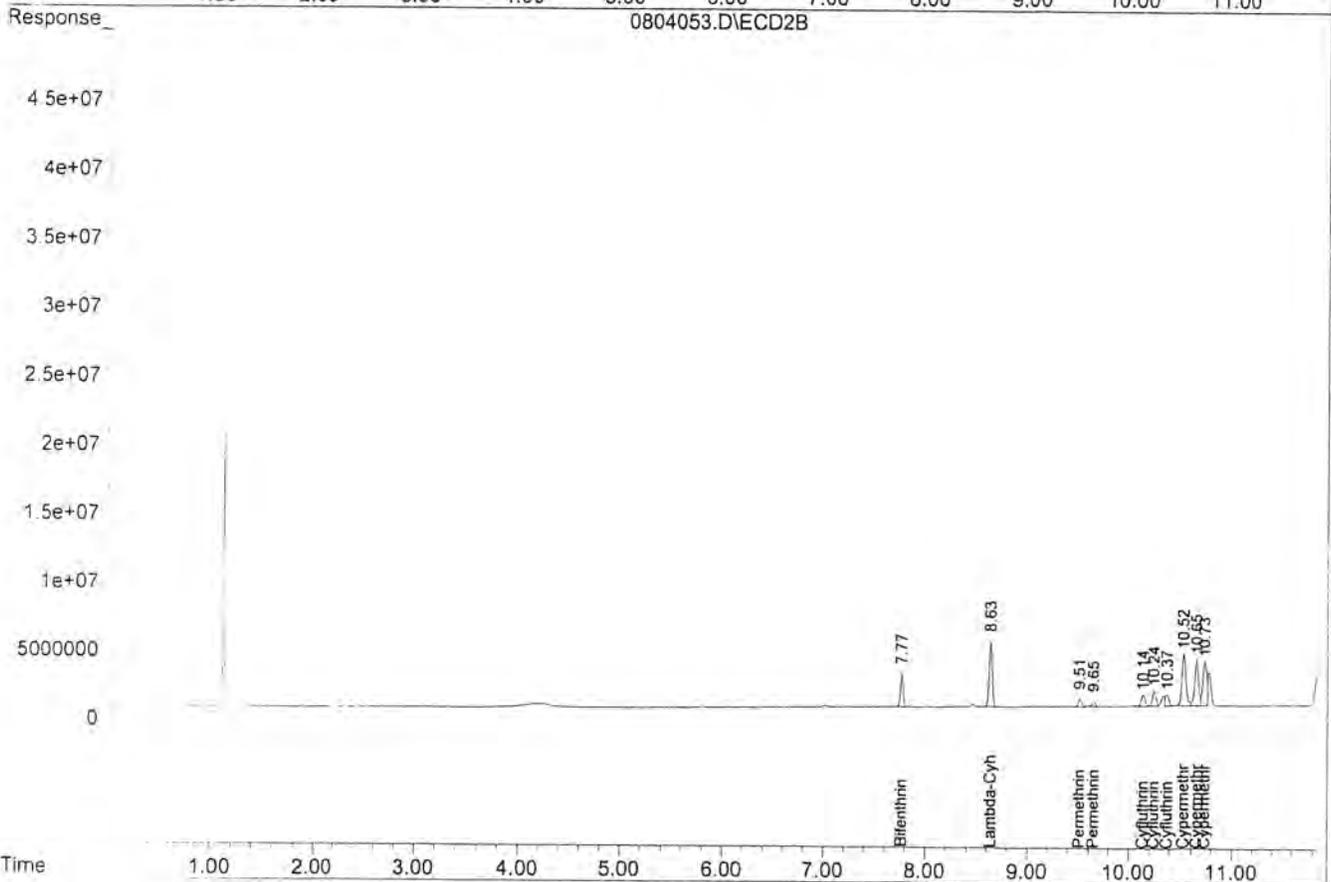
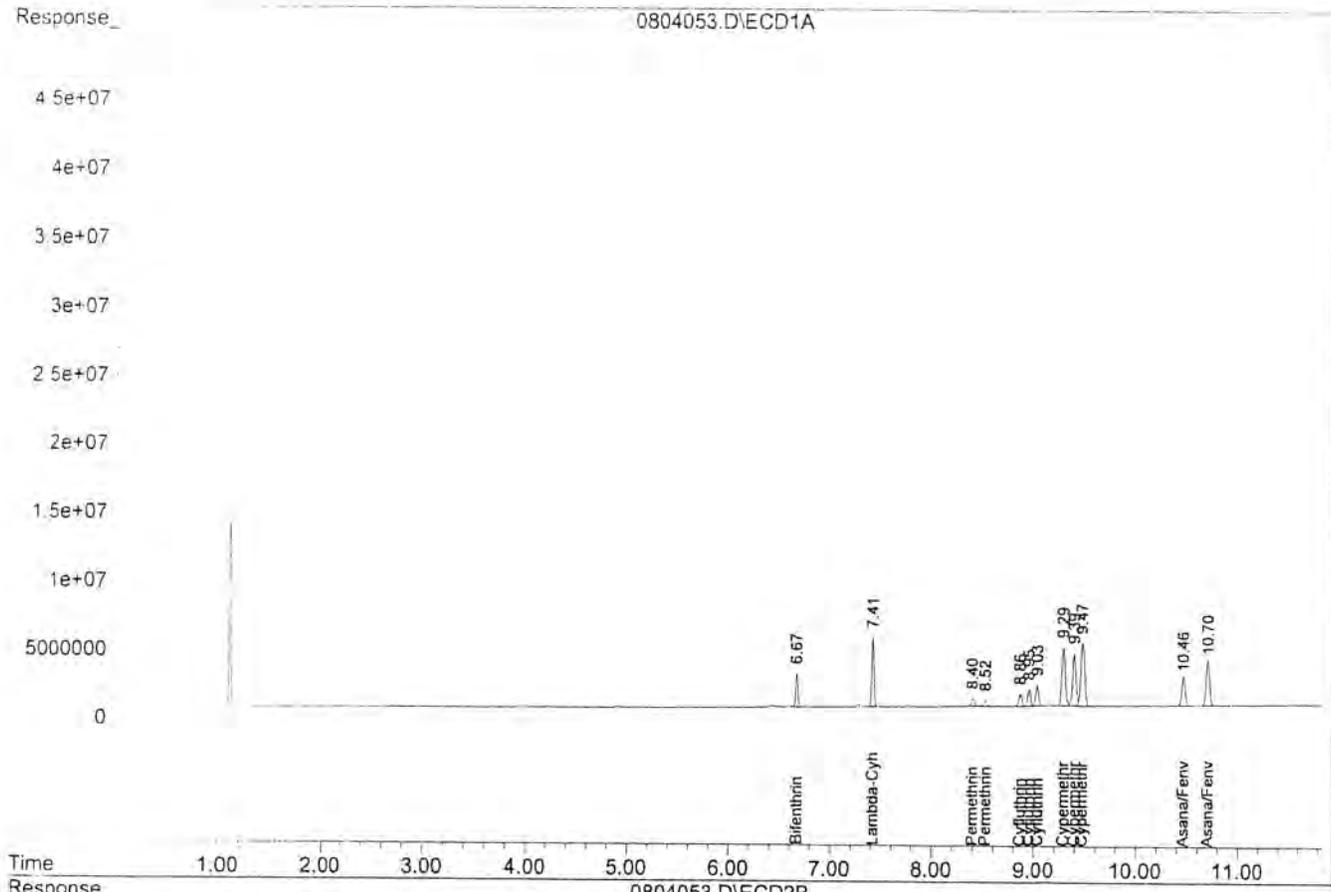
Compound	RT#1	RT#2	Resp#1	Resp#2	t#1	t#2

Target Compounds						
1) Bifenthrin	6.67	7.77	2441725	2419527	0.0894	0.0922
2) Lambda-Cyhalothr	7.41	8.63	5062269	4796811	0.0942	0.0974
3) Permethrin 1	8.40	9.51	574040	565334	0.0928	0.0976
4) Permethrin 2	8.52	9.65	418702	391946	0.0954	0.0990
5) Cyfluthrin 1	8.86	10.14	890239	812069	0.0957	0.0982
6) Cyfluthrin 2	8.95	10.24	1204004	1102382	0.0968	0.0974
7) Cyfluthrin 3	9.03	10.37	1507835	822619	0.0971	0.0951
8) Cypermethrin 1	9.29	10.52	4243285	3798649	0.4754	0.4750
9) Cypermethrin 2	9.39	10.65	3832870	3432872	0.4871	0.4909
10) Cypermethrin 3	9.47	10.73	4578524	3240853	0.4631	0.4723
11) Asana/Fenvalerat	10.46	0.00	2153088	0	0.0954	N.D. #
Asana/Fenvalerat	10.70	0.00	3376505	0	0.0929	N.D. #

Target Compounds

Data File : G:\LUCY\DATA\040804\0804053.D
Acq On : 8-5-04 15:36:07
Sample : PYRTH2-4 7/2/04
Misc : WATER
Quant Method : G:\LUCY\DATA\040804\PRTH.M

Vial: 53
Operator: SA
Inst : Lucy
Multiplr: 1.00



Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804054.D\ECD1A.CH Vial: 54
 Signal #2 : G:\LUCY\DATA\040804\0804054.D\ECD2B.CH
 Acq On : 8-5-04 15:50:49 Operator: SA
 Sample : PYRTH2-5 7/2/04 Inst : Lucy
 Misc : WATER Multiplr: 1.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 18:40 2004 Quant Results File: PPTH.RES

Quant Method : G:\LUCY\DATA\040804\PRTH.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 16:39:19 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

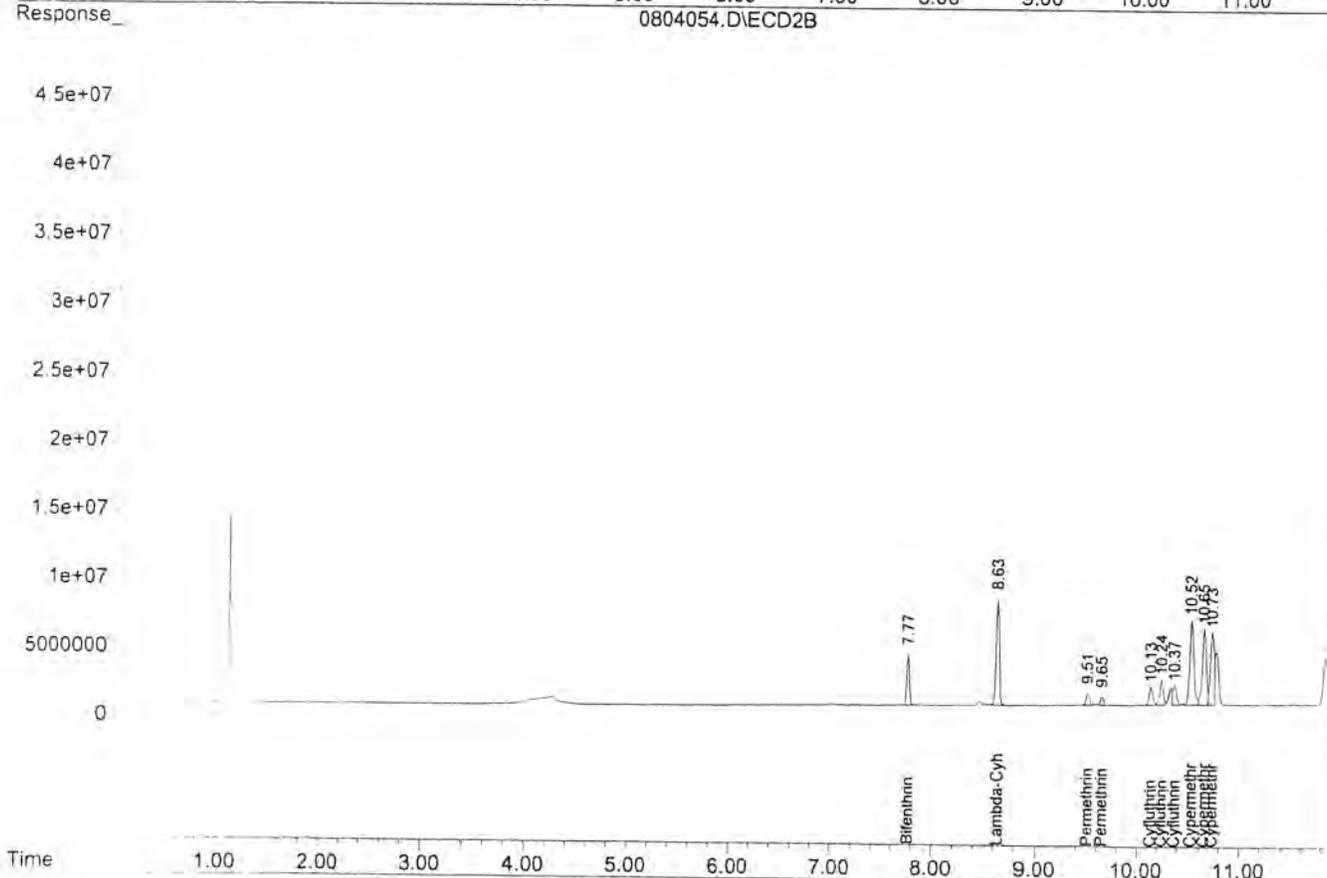
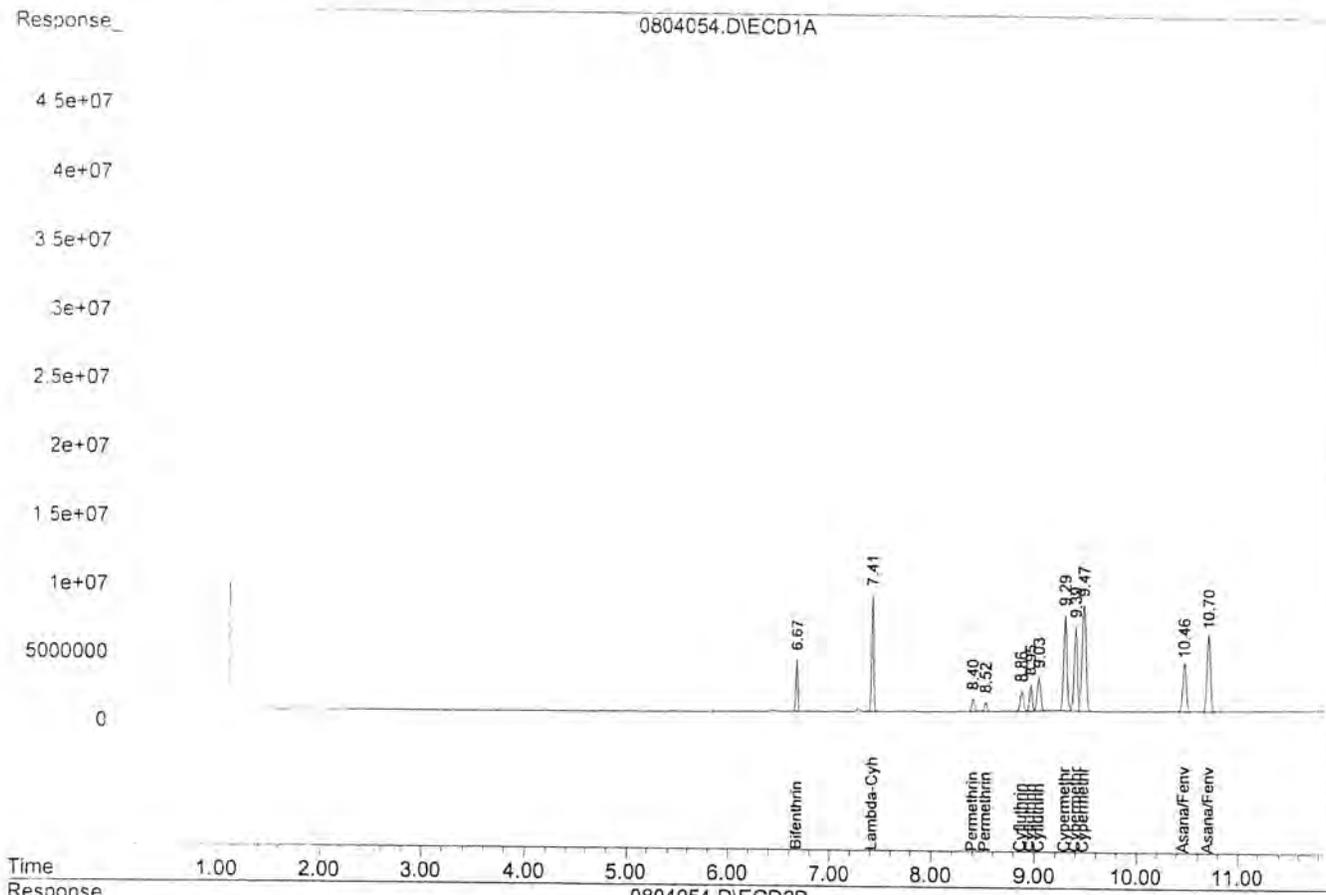
Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	t#1	t#2
Target Compounds						
1) Bifenthrin	6.67	7.77	3809061	3685981	0.1395	0.1404
2) Lambda-Cyhalothr	7.41	8.63	8511957	7729216	0.1584	0.1569
3) Permethrin 1	8.40	9.51	904898	849084	0.1463	0.1465
4) Permethrin 2	8.52	9.65	662772	603815	0.1510	0.1525
5) Cyfluthrin 1	8.86	10.13	1470403	1312424	0.1580	0.1587
6) Cyfluthrin 2	8.95	10.24	1931813	1843782	0.1553	0.1629
7) Cyfluthrin 3	9.03	10.37	2464818	1424001	0.1587	0.1646
8) Cypermethrin 1	9.29	10.52	6985166	6202068	0.7826	0.7756
9) Cypermethrin 2	9.39	10.65	6146661	5553895	0.7812	0.7941
10) Cypermethrin 3	9.47	10.73	7718271	5296459	0.7806	0.7718
11) Asana/Fenvalerat	10.46	0.00	3578366	0	0.1585	N.D. #
Asana/Fenvalerat	10.70	0.00	5706585	0	0.1570	N.D. #

Target Compounds

Data File : G:\LUCY\DATA\040804\0804054.D
 Acq On : 8-5-04 15:50:49
 Sample : PYRTH2-5 7/2/04
 Misc : WATER
 Quant Method : G:\LUCY\DATA\040804\PRTH.M

Vial: 54
 Operator: SA
 Inst : Lucy
 Multiplr: 1.00



Signal #1 : G:\LUCY\DATA\040804\0804055.D\ECD1A.CH Vial: 55
 Signal #2 : G:\LUCY\DATA\040804\0804055.D\ECD2B.CH
 Acq On : 8-5-04 16:05:29 Operator: SA
 Sample : PYRTH2-6 7/2/04 Inst : Lucy
 Misc : WATER Multiplr: 1.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 18:40 2004 Quant Results File: PPTH.RES

Quant Method : G:\LUCY\DATA\040804\PPTH.M (R1E Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 16:39:19 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

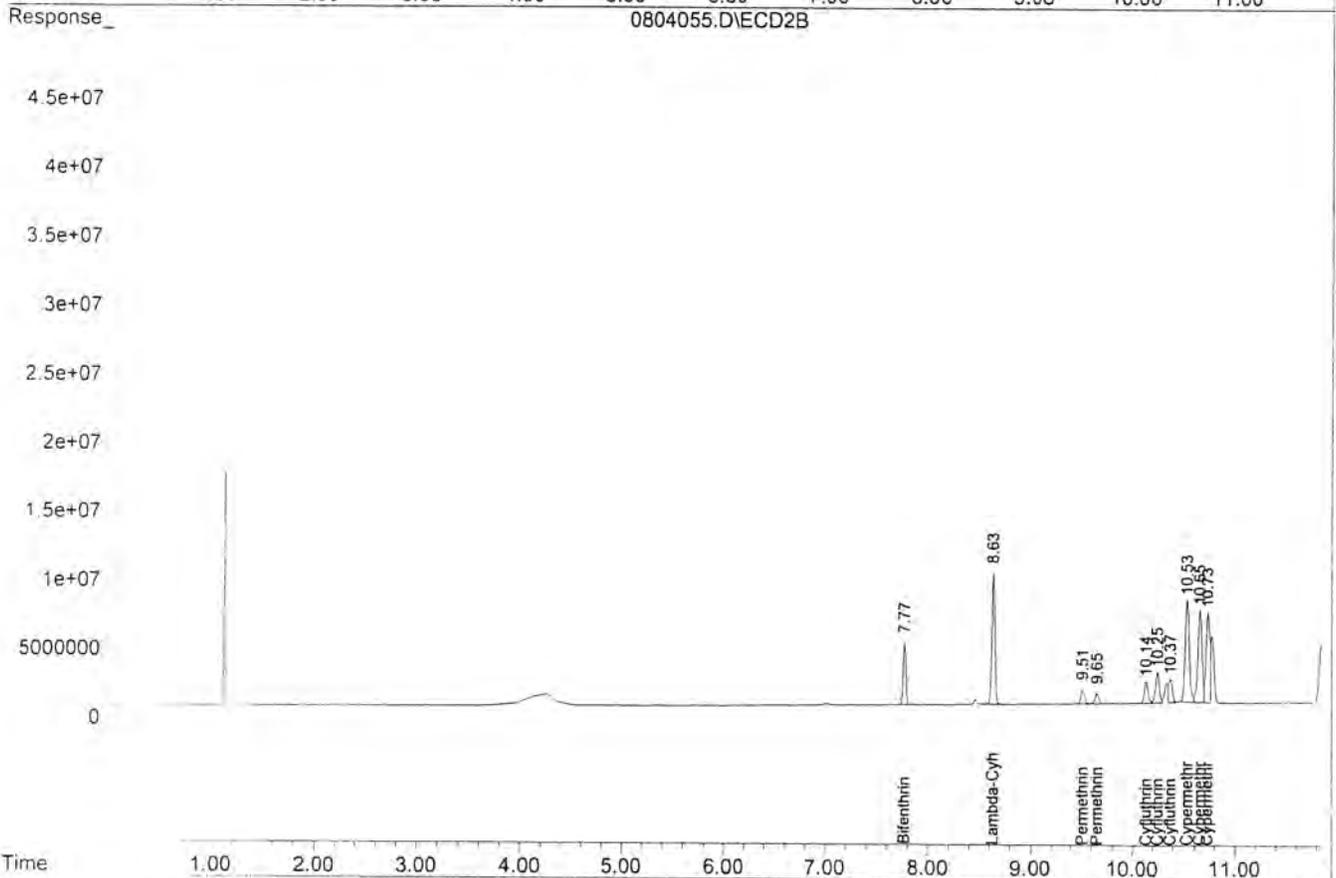
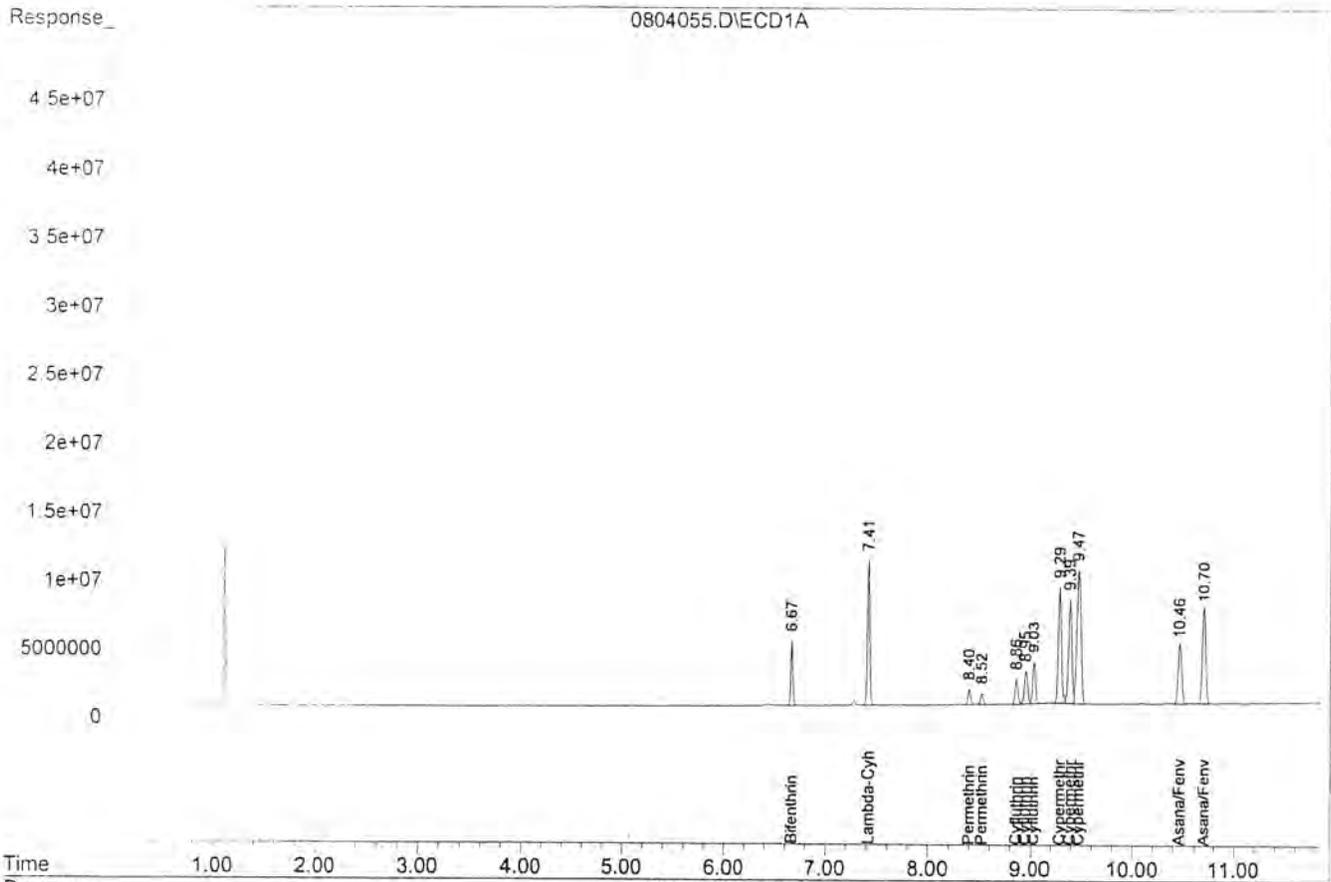
Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	t#1	t#2
Target Compounds						
1) Bifenthrin	6.67	7.77	4721409	4512092	0.1729	0.1719
2) Lambda-Cyhalothr	7.41	8.63	10571614	9547970	0.1967	0.1938
3) Permethrin 1	8.40	9.51	1109278	1051111	0.1793	0.1814
4) Permethrin 2	8.52	9.65	803460	740752	0.1831	0.1871
5) Cyfluthrin 1	8.86	10.14	1813685	1594184	0.1949	0.1928
6) Cyfluthrin 2	8.95	10.25	2391046	2221820	0.1922	0.1964
7) Cyfluthrin 3	9.03	10.37	3025174	1689253	0.1948	0.1952
8) Cypermethrin 1	9.29	10.53	8461291	7436458	0.9480	0.9299
9) Cypermethrin 2	9.39	10.65	7590573	6749244	0.9647	0.9651
10) Cypermethrin 3	9.47	10.73	9743253	6555759	0.9854	0.9554
11) Asana/Fenvalerat	10.46	0.00	4462466	0	0.1976	N.D. #
Asana/Fenvalerat	10.70	0.00	7061827	0	0.1943	N.D. #

Target Compounds

Data File : G:\LUCY\DATA\040804\0804055.D
Acq On : 8-5-04 16:05:29
Sample : PYRTH2-6 7/2/04
Misc : WATER
Quant Method : G:\LUCY\DATA\040804\PRTH.M

Vial: 55
Operator: SA
Inst : Lucy
Multiplr: 1.00



Signal #1 : G:\LUCY\DATA\040804\0804056.D\ECD1A.CH Vial: 56
 Signal #2 : G:\LUCY\DATA\040804\0804056.D\ECD2B.CH
 Acq On : 8-5-04 16:20:10 Operator: SA
 Sample : PYRTH2-7 7/2/04 Inst : Lucy
 Misc : WATER Multiplr: 1.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 18:40 2004 Quant Results File: PPTH.RES

Quant Method : G:\LUCY\DATA\040804\PPTH.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 16:39:19 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	t#1	t#2

Target Compounds						
1) Bifenthrin	6.67	7.76	5875061	5621105	0.2152	0.2142
2) Lambda-Cyhalothr	7.41	8.63	13588868	11975398	0.2528	0.2431
3) Permethrin 1	8.40	9.51	1378564	1258384	0.2228	0.2172
4) Permethrin 2	8.52	9.65	1002625	902830	0.2285	0.2281
5) Cyfluthrin 1	8.86	10.13	2248106	2035182	0.2415	0.2461
6) Cyfluthrin 2	8.95	10.24	3127193	2901501	0.2513	0.2564
7) Cyfluthrin 3	9.03	10.37	3822067	2270580	0.2461	0.2624
8) Cypermethrin 1	9.29	10.52	10867557	9456140	1.2175	1.1825
9) Cypermethrin 2	9.39	10.65	9799529	8446370	1.2454	1.2077
10) Cypermethrin 3	9.47	10.73	12342572	8219494	1.2483	1.1978
11) Asana/Fenvalerat	10.46	11.67f	5658137	17419	0.2506	0.2500
Asana/Fenvalerat	10.70	11.67f	9166905	17419	0.2522	0.2500

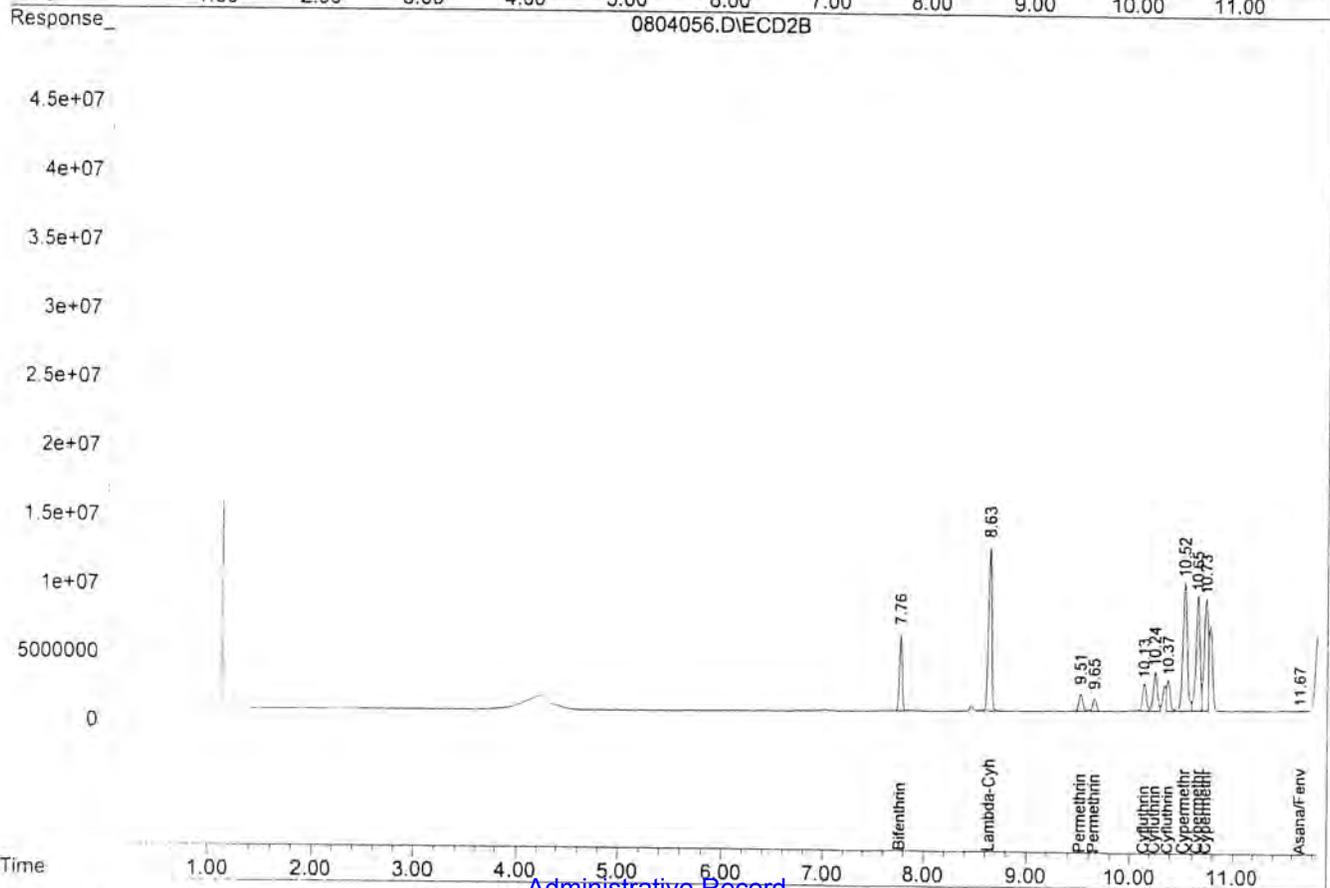
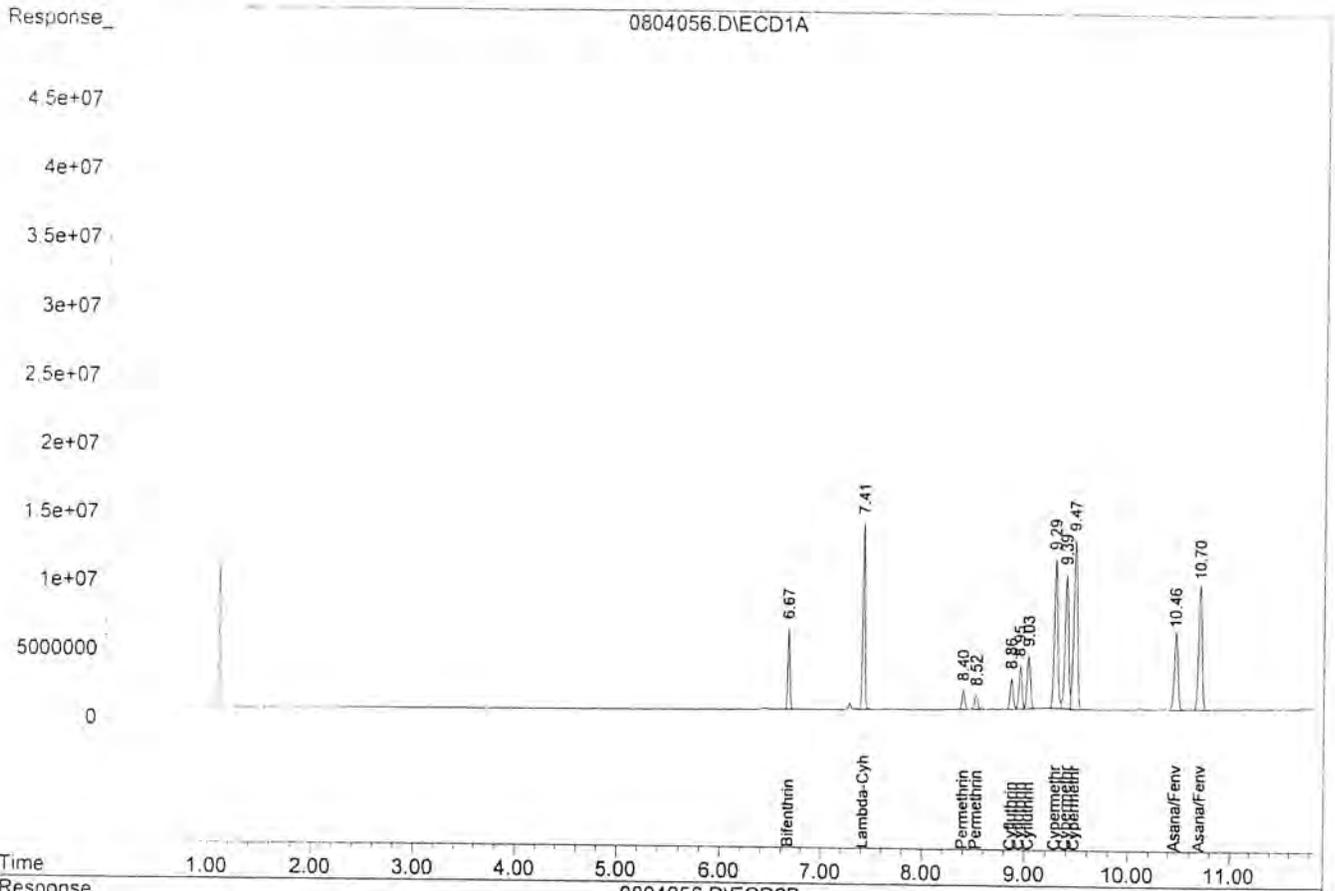
Target Compounds

Quantitation Report

(Not Reviewed)

Data File : G:\LUCY\DATA\040804\0804056.D
Acq On : 8-5-04 16:20:10
Sample : PYRTH2-7 7/2/04
Misc : WATER
Quant Method : G:\LUCY\DATA\040804\PRTH.M

Vial: 56
Operator: SA
Inst : Lucy
Multiplr: 1.00



Evaluate Continuing Calibration Report

Signal #1 : G:\LUCY\DATA\040804\0804057.D\ECD1A.CH Vial: 57
 Signal #2 : G:\LUCY\DATA\040804\0804057.D\ECD2B.CH
 Acq On : 8-5-04 16:34:52 Operator: SA
 Sample : PYRTH2 2ND SRC 7/2/04 Inst : Lucy
 Misc : WATER Multiplr: 1.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p

Method : G:\LUCY\DATA\040804\PRTH.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 16:39:19 2004
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 25% Max. R.T. Dev 0.20min
 Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	AvgRF	CCRF	%Dev	Area%	Dev (Min)
1 Bifenthrin	27.302	22.294 E6	18.3#	88	0.00
2 Lambda-Cyhalothrin	53.751	48.952 E6	8.9	86	0.00
3 Permethrin 1	6.187	5.821 E6	5.9	96	0.00
4 Permethrin 2	4.389	3.205 E6	27.0	73	0.00
5 Cyfluthrin 1	9.307	8.858 E6	4.8	90	0.00
6 Cyfluthrin 2	12.442	11.706 E6	5.9	91	0.00
7 Cyfluthrin 3	15.530	12.431 E6	20.0	76	0.00
8 Cypermethrin 1	8.926	7.948 E6	11.0	85	0.00
9 Cypermethrin 2	7.869	7.245 E6	7.9	88	0.00
10 Cypermethrin 3	9.887	9.230 E6	6.6	90	0.00
11 Asana/Fenvalerate 1	22.578	19.822 E6	12.2	83	0.00
12 Asana/Fenvalerate 2	36.342	32.733 E6	9.9	86	0.00

Signal #2

1 Bifenthrin	26.247	21.391 E6	18.5#	87	0.00
2 Lambda-Cyhalothrin	49.261	44.218 E6	10.2	86	0.00
3 Permethrin 1	5.795	5.408 E6	6.7	96	0.00
4 Permethrin 2	3.959	2.946 E6	25.6	73	0.00
5 Cyfluthrin 1	8.270	7.696 E6	6.9	88	0.00
6 Cyfluthrin 2	11.315	10.270 E6	9.2	84	0.00
7 Cyfluthrin 3	8.653	6.403 E6	26.0	67	0.00
8 Cypermethrin 1	7.997	7.197 E6	10.0	87	0.00
9 Cypermethrin 2	6.994	6.461 E6	7.6	87	0.00
10 Cypermethrin 3	6.862	6.151 E6	10.4	87	0.00

(#) = Out of Range
 0804054.D PRTH.M

SPCC's out = 0 CCC's out = 0
 Thu Aug 05 17:11:55 2004

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804057.D\ECD1A.CH Vial: 57
 Signal #2 : G:\LUCY\DATA\040804\0804057.D\ECD2B.CH
 Acq On : 8-5-04 16:34:52 Operator: SA
 Sample : PYRTH2 2ND SRC 7/2/04 Inst : Lucy
 Misc : WATER Multiplr: 1.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 18:41 2004 Quant Results File: PRTH.RES

Quant Method : G:\LUCY\DATA\040804\PRTH.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 16:39:19 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	t#1	t#2

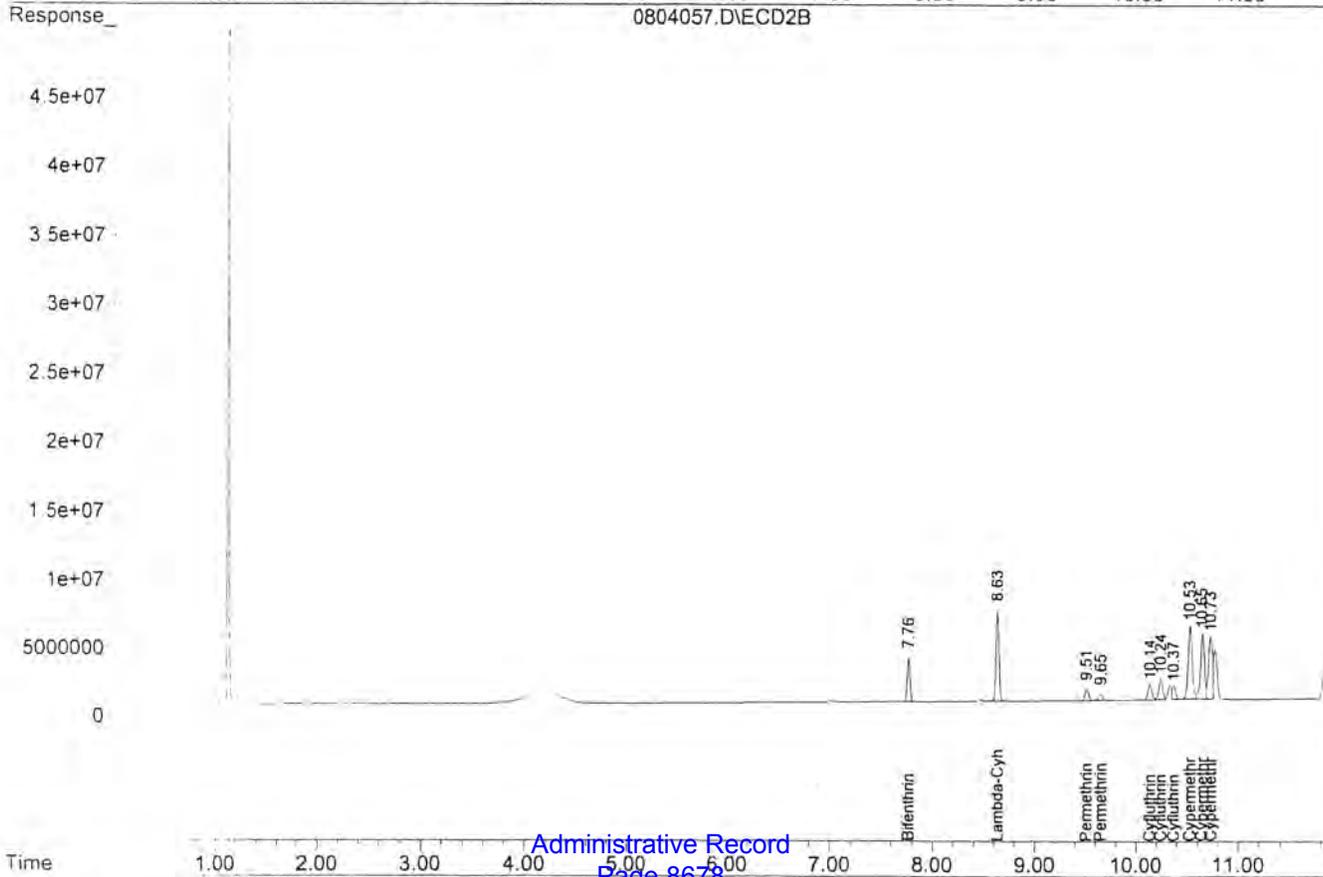
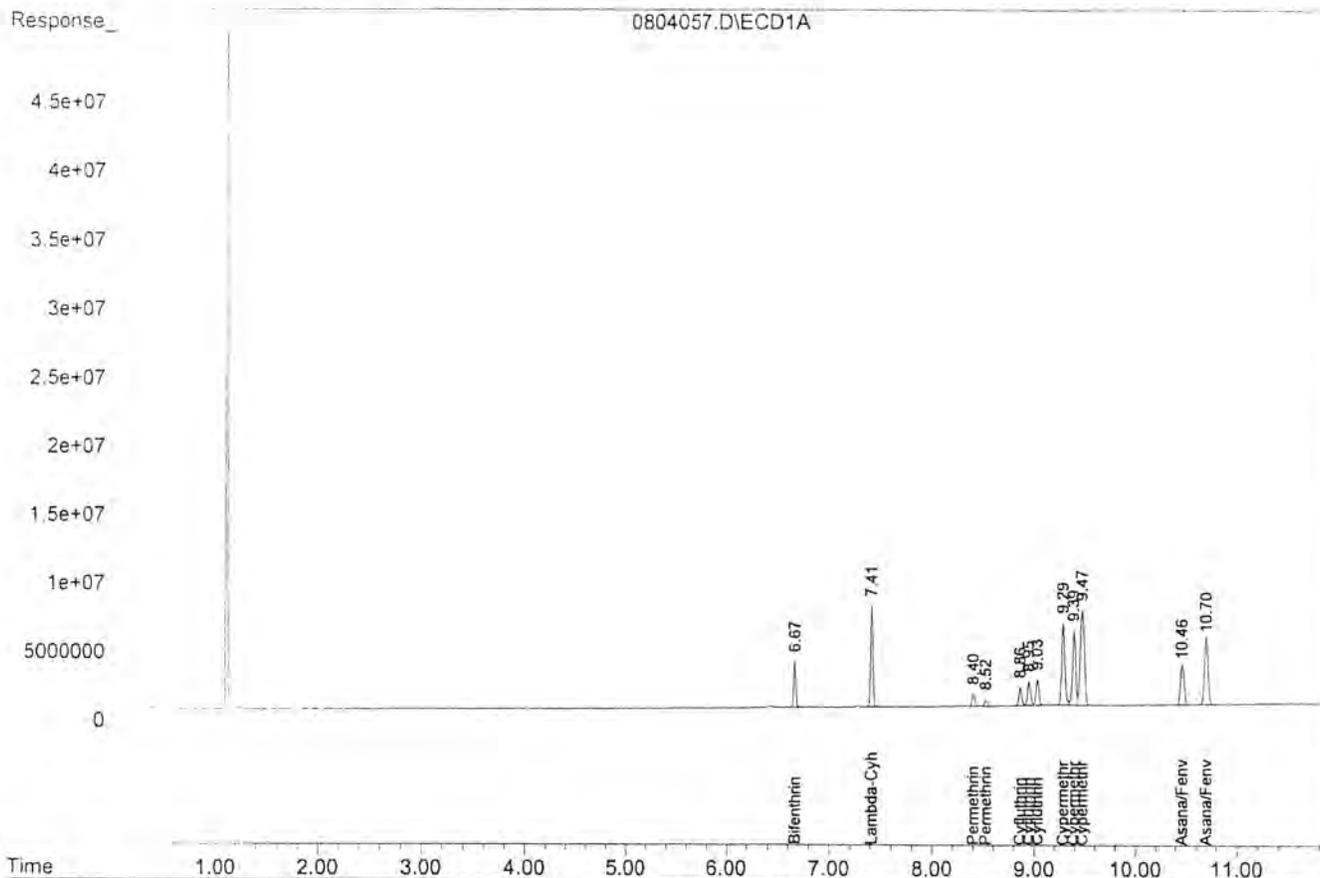
Target Compounds						
1) Bifenthrin	6.67	7.76	3344075	3208593	0.1225	0.1222
2) Lambda-Cyhalothr	7.41	8.63	7342795	6632667	0.1366	0.1346
3) Permethrin 1	8.40	9.51	873075	811159	0.1411	0.1400
4) Permethrin 2	8.52	9.65	480676	441862	0.1095	0.1116
5) Cyfluthrin 1	8.86	10.14	1328684	1154376	0.1428	0.1396
6) Cyfluthrin 2	8.95	10.24	1755949	1540519	0.1411	0.1361
7) Cyfluthrin 3	9.03	10.37	1864601	960481	0.1201	0.1110
8) Cypermethrin 1	9.29	10.53	5961112	5397773	0.6678	0.6750
9) Cypermethrin 2	9.39	10.65	5434057	4845515	0.6906	0.6928
10) Cypermethrin 3	9.47	10.73	6922314	4613456	0.7001	0.6723
) Asana/Fenvalerat	10.46	0.00	2973374	0	0.1317	N.D. #
) Asana/Fenvalerat	10.70	0.00	4910020	0	0.1351	N.D. #

Target Compounds

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\040804\0804057.D
 Acq On : 8-5-04 16:34:52
 Sample : PYRTH2 2ND SRC 7/2/04
 Misc : WATER
 Quant Method : G:\LUCY\DATA\040804\PRTH.M

Vial: 57
 Operator: SA
 Inst : Lucy
 Multiplr: 1.00



Organochlorine Pesticides Analysis by
EPA Method 608/8081

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No: _____
Matrix: Water

SDG No: 45034
Date Analyzed: 8/5/04
Instrument: Lucy
Initial Cal. Date: 8/4/04
Data File: 0804077.D

		Compound	MEAN	CCRF	%D	%Drift
1	S	TCMX	120768000	127604000	5.7	S
2	TM	A-BHC	158551000	182381000	15	TM
3	TM	B-BHC	58533700	59967400	2.4	TM
4	M	G-BHC(LINDANE)	145076000	164240000	13	M
5	TM	D-BHC	146470000	169701000	16	TM
6	M	HEPTACHLOR	131940000	143152000	8.5	M
7	M	ALDRIN	122628000	136708000	11	M
8	TM	HEPTACHLOR EPOXIDE	117837000	127733000	8.4	TM
9	TM	G-CHLORDANE	116570000	127262000	9.2	TM
10	TM	A-ENDOSULFAN	100845000	108725000	7.8	TM
11	TM	A-CHLORDANE	113799000	123300000	8.3	TM
12	TM	P,P-DDE	117966000	133124000	13	TM
13	M	DIELDRIN	119257000	133013000	12	M
14	M	ENDRIN	95399500	103945000	9.0	M
15	TM	B-ENDOSULFAN	101160000	98411000	2.7	TM
16	TM	P,P-DDD	97122600	111191000	14	TM
17	TM	ENDRIN ALDEHYDE	74160300	77324700	4.3	TM
18	M	P,P-DDT	97247200	94936200	2.4	M
19	TM	ENDOSULFAN SULFATE	82604600	85462400	3.5	TM
20	TM	ENDRIN KETONE	93388600	99691900	6.7	TM
21	TM	METHOXYCHLOR	45956600	42378500	7.8	TM
22	S	DBC	75323100	78121400	3.7	S
23	S	DECA	59721400	57389900	3.9	S
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						
Average					8.2	

Organochlorine Pesticides Analysis by
EPA Method 608/8081

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No: _____
Matrix: Water

SDG No: 45039
Date Analyzed: 8/5/04
Instrument: Lucy
Cal. Date: 8/4/04
Data File: 0804077.D

		Compound	MEAN	CCRF	%D	%Drift
41	S	TCMX	121512000	128336000	5.6	S
42	TM	A-BHC	160551000	179359000	12	TM
43	TM	B-BHC	59542400	61151800	2.7	TM
44	M	G-BHC(LINDANE)	144460000	160640000	11	M
45	TM	D-BHC	147170000	166311000	13	TM
46	M	HEPTACHLOR	132336000	142808000	7.9	M
47	M	ALDRIN	123944000	135541000	9.4	M
48	TM	HEPTACHLOR EPOXIDE	119291000	128443000	7.7	TM
49	TM	G-CHLORDANE	112042000	120376000	7.4	TM
50	TM	A-ENDOSULFAN	95806000	100043000	4.4	TM
51	TM	A-CHLORDANE	109005000	116261000	6.7	TM
52	TM	P,P-DDE	110606000	121365000	9.7	TM
53	M	DIELDRIN	108329000	115480000	6.6	M
54	ML	ENDRIN	128392000	92861000	28	ML 2.5
55	TM	B-ENDOSULFAN	83018200	86979500	4.8	TM
56	TM	P,P-DDD	90464900	97707100	8.0	TM
57	TM	ENDRIN ALDEHYDE	68147700	70520100	3.5	TM
58	M	P,P-DDT	86339100	81415600	5.7	M
59	TM	ENDOSULFAN SULFATE	75289100	75665100	0.50	TM
60	TM	ENDRIN KETONE	86164600	90052600	4.5	TM
61	TM	METHOXYCHLOR	45240800	40117100	11	TM
62	S	DBC	68550300	69708100	1.7	S
63	S	DECA	52933300	49919200	5.7	S
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79						
80						

Average

7.7

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804077.D\ECD1A.CH Vial: 77
 Signal #2 : G:\LUCY\DATA\040804\0804077.D\ECD2B.CH
 Acq On : 8-5-04 21:28:38 Operator: SA
 Sample : OCL-4 6/3/04 Inst : Lucy
 Misc : WATER Multiplr: 1.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 6 8:45 2004 Quant Results File: OCL.RES

Quant Method : G:\LUCY\DATA\040804\OCL.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 11:03:57 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

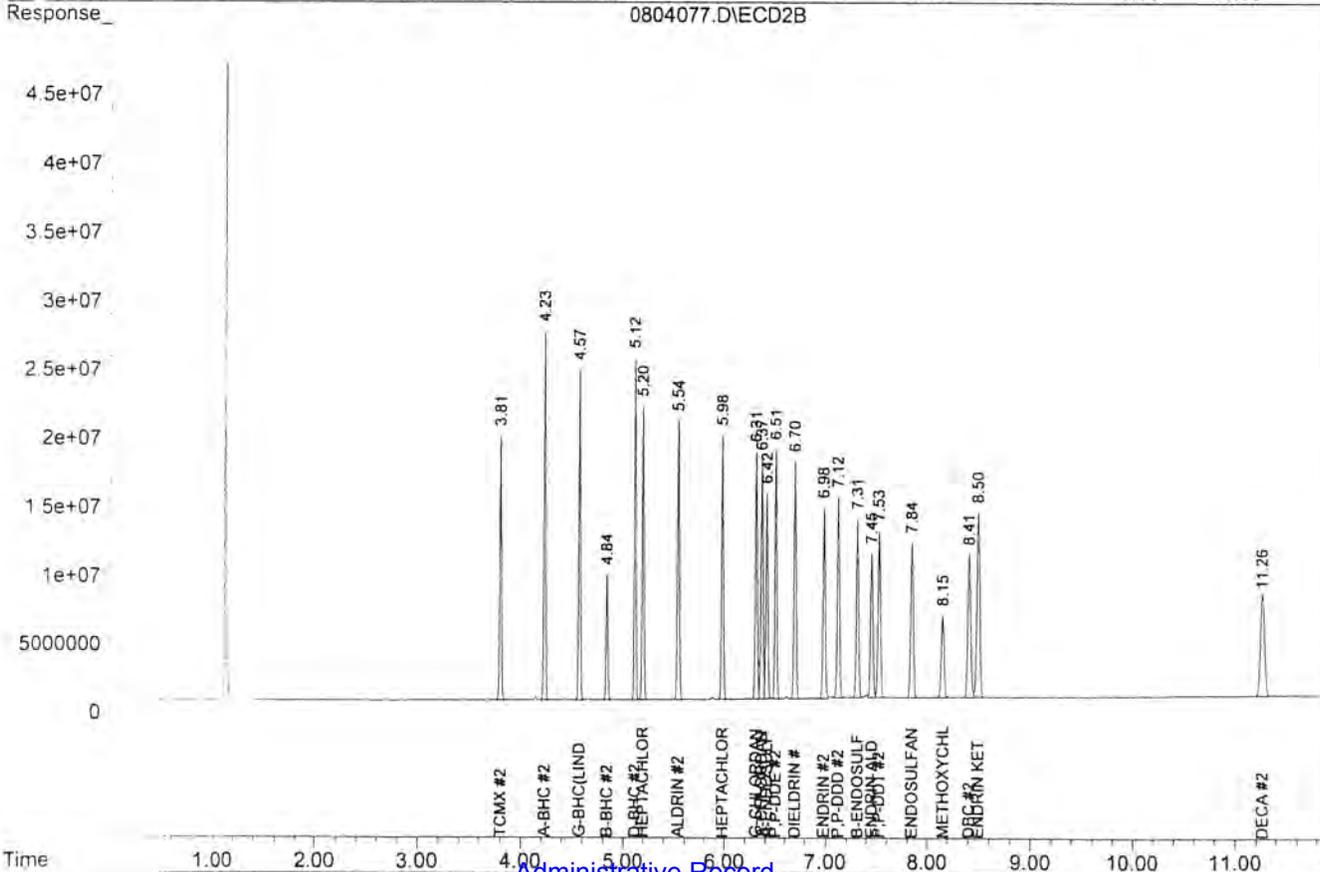
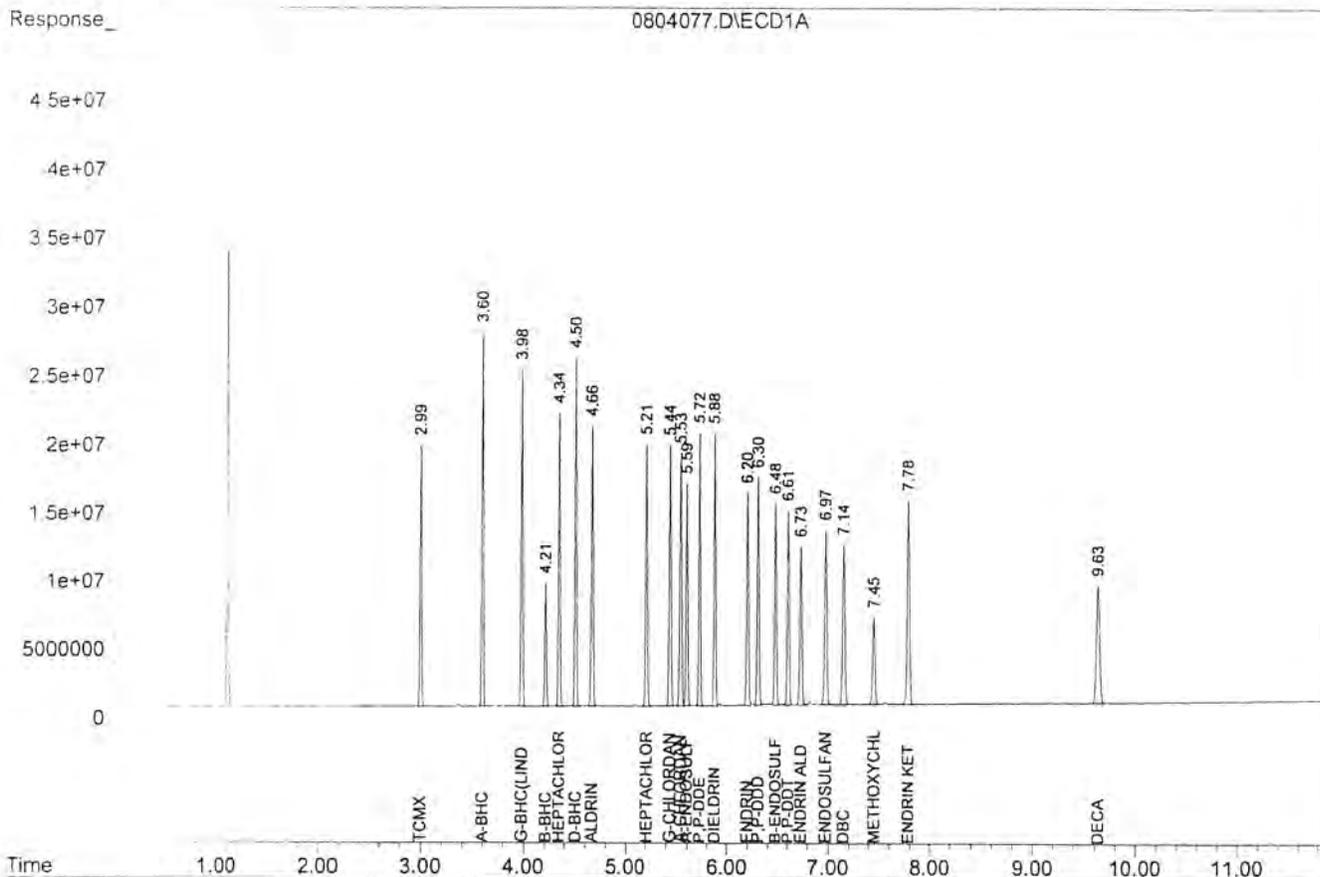
Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2
System Monitoring Compounds						
1) S TCMX	2.99	3.81	19140613	19250473	0.1585	0.1584
Surrogate Spike	0.150	Range	25 - 150	Recovery =	105.67%	105.60%
22) S DBC	7.14	8.41	11718209	10456213	0.1556	0.1525
Surrogate Spike	0.150			Recovery =	103.73%	101.67%
23) S DECA	9.63	11.26	8608492	7487873	0.1441	0.1415
Surrogate Spike	0.150	Range	25 - 150	Recovery =	96.07%	94.33%
Target Compounds						
2) TM A-BHC	3.60	4.23	27357177	26903924	0.1725	0.1676
3) TM B-BHC	4.21	4.84	8995104	9172773	0.1537	0.1541
4) M G-BHC (LINDANE)	3.98	4.57	24635980	24095965	0.1698	0.1668
5) TM D-BHC	4.50	5.12	25455088	24946687	0.1738	0.1695
6) M HEPTACHLOR	4.34	5.20	21472850	21421194	0.1627	0.1619
7) M ALDRIN	4.66	5.54	20506225	20331122	0.1672	0.1640
8) TM HEPTACHLOR EPOXI	5.21	5.98	19160024	19266519	0.1626	0.1615
9) TM G-CHLORDANE	5.44	6.31	19089232	18056439	0.1638	0.1612
10) TM A-ENDOSULFAN	5.59	6.42	16308801	15006378	0.1617	0.1566
11) TM A-CHLORDANE	5.53	6.37	18495058	17439162	0.1625	0.1600
12) TM P,P-DDE	5.72	6.51	19968542	18204788	0.1693	0.1646
13) M DIELDRIN	5.88	6.70	19951978	17321942	0.1673	0.1599
14) M ENDRIN	6.20	6.98	15591700	13929151	0.1634	0.1537
15) TM B-ENDOSULFAN	6.48	7.31	14761645	13046920	0.1459	0.1572
16) TM P,P-DDD	6.30	7.12	16678685	14656071	0.1717	0.1620
17) TM ENDRIN ALDEHYDE	6.73	7.45	11598708	10578019	0.1564	0.1552
18) M P,P-DDT	6.61	7.53	14240430	12212346	0.1464	0.1414
19) TM ENDOSULFAN SULFA	6.97	7.84	12819360	11349772	0.1552	0.1507
20) TM ENDRIN KETONE	7.78	8.50	14953783	13507884	0.1601	0.1568
21) TM METHOXYCHLOR	7.45	8.15	6356774	6017559	0.1383	0.1330

Target Compounds

Data File : G:\LUCY\DATA\040804\0804077.D
Acq On : 8-5-04 21:28:38
Sample : OCL-4 6/3/04
Misc : WATER
Quant Method : G:\LUCY\DATA\040804\OCL.M

Vial: 77
Operator: SA
Inst : Lucy
Multipir: 1.00



Evaluate Continuing Calibration Report

Signal #1 : G:\LUCY\DATA\040804\0804080.D\ECD1A.CH Vial: 80
 Signal #2 : G:\LUCY\DATA\040804\0804080.D\ECD2B.CH
 Acq On : 8-5-04 22:12:35 Operator: SA
 Sample : PRYTH2-5 7/2/04 Inst : Lucy
 Misc : WATER Multiplr: 1.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p

Method : G:\LUCY\DATA\040804\PRTH.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 16:39:19 2004
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 25% Max. R.T. Dev 0.20min
 Max. RRF Dev : 15% Max. Rel. Area : 150%

Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1 Bifenthrin	27.302	27.853 E6	-2.0	110	0.00
2 Lambda-Cyhalothrin	53.751	62.166 E6	-15.7#	110	0.00
3 Permethrin 1	6.187	6.280 E6	-1.5	104	0.00
4 Permethrin 2	4.389	4.716 E6	-7.5	107	0.00
5 Cyfluthrin 1	9.307	10.222 E6	-9.8	104	0.00
6 Cyfluthrin 2	12.442	14.614 E6	-17.5#	113	0.00
7 Cyfluthrin 3	15.530	17.351 E6	-11.7	106	0.00
8 Cypermethrin 1	8.926	9.690 E6	-8.6	104	0.00
9 Cypermethrin 2	7.869	8.601 E6	-9.3	105	0.00
10 Cypermethrin 3	9.887	10.709 E6	-8.3	104	0.00
11 Asana/Fenvalerate 1	22.578	24.759 E6	-9.7	104	0.00
12 Asana/Fenvalerate 2	36.342	41.056 E6	-13.0	108	0.00

Signal #2

1 Bifenthrin	26.247	27.069 E6	-3.1	110	0.00
2 Lambda-Cyhalothrin	49.261	57.146 E6	-16.0#	111	0.00
3 Permethrin 1	5.795	6.215 E6	-7.2	110	0.00
4 Permethrin 2	3.959	4.301 E6	-8.6	107	0.00
5 Cyfluthrin 1	8.270	8.904 E6	-7.7	102	0.00
6 Cyfluthrin 2	11.315	12.159 E6	-7.5	99	0.00
7 Cyfluthrin 3	8.653	9.524 E6	-10.1	100	0.00
8 Cypermethrin 1	7.997	8.649 E6	-8.2	105	0.00
9 Cypermethrin 2	6.994	7.647 E6	-9.3	103	0.00
10 Cypermethrin 3	6.862	7.644 E6	-11.4	108	0.00

(#) = Out of Range
 0804054.D PRTH.M

SPCC's out = 0 CCC's out = 0
 Fri Aug 06 08:36:28 2004

Signal #1 : G:\LUCY\DATA\040804\0804080.D\ECD1A.CH Vial: 80
 Signal #2 : G:\LUCY\DATA\040804\0804080.D\ECD2B.CH
 Acq Cn : 8-5-04 22:12:35 Operator: SA
 Sample : PRYTH2-5 7/2/04 Inst : Lucy
 Misc : WATER Multiplr: 1.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 6 8:54 2004 Quant Results File: PRTH.RES

Quant Method : G:\LUCY\DATA\040804\PRTH.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 16:39:19 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

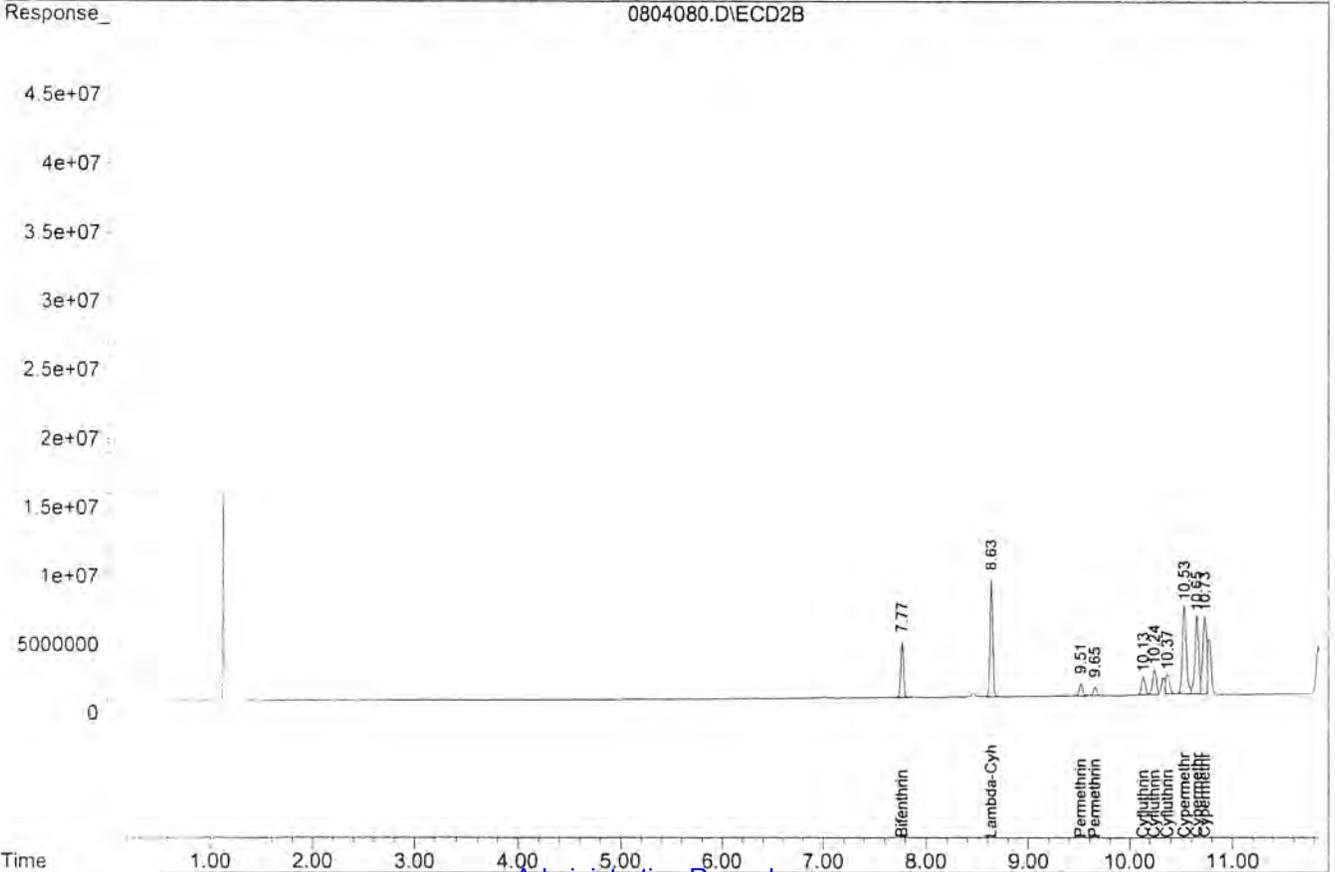
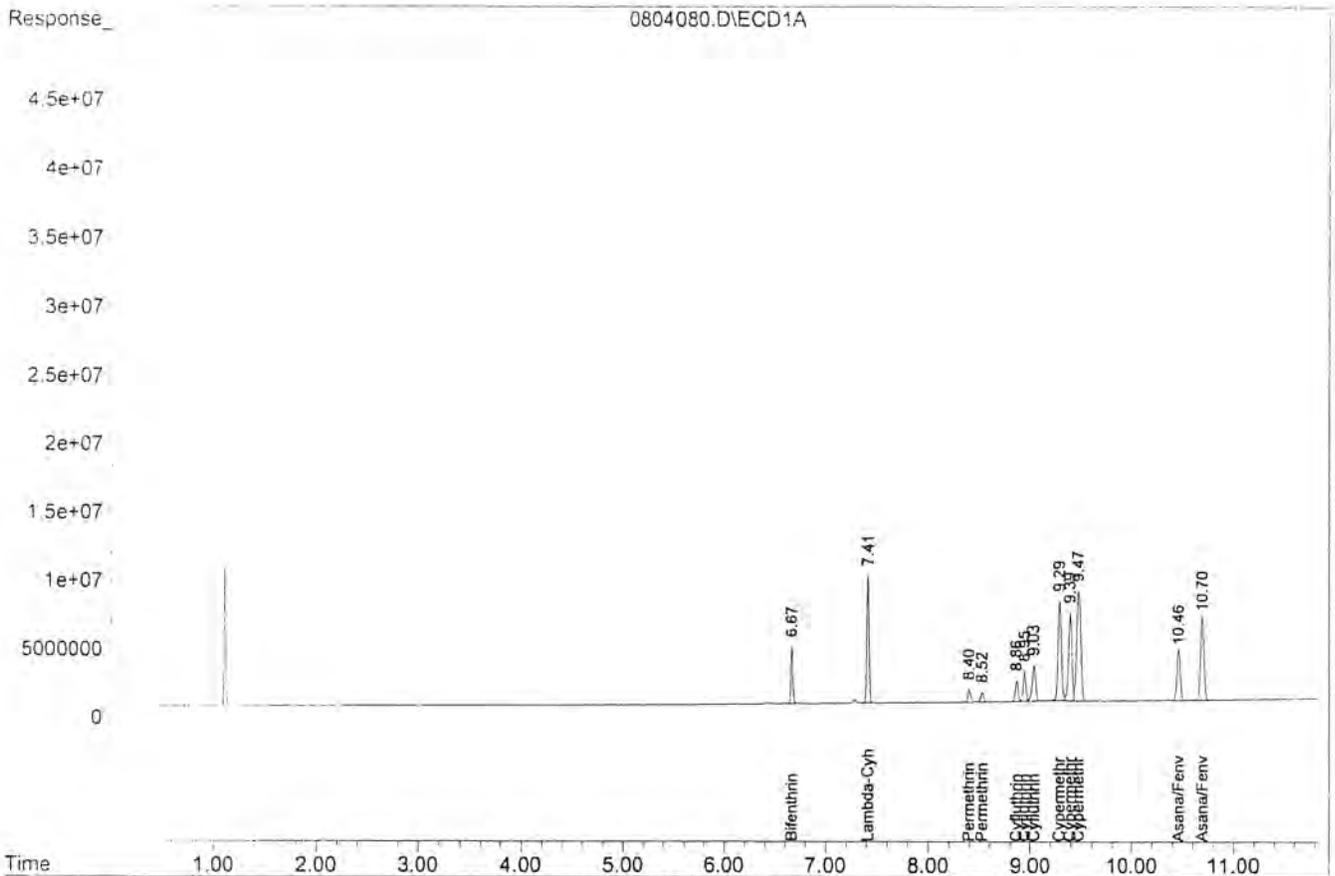
Compound	RT#1	RT#2	Resp#1	Resp#2	t#1	t#2

Target Compounds						
1)	Bifenthrin	6.67	7.77	4177912	4060350	0.1530 0.1547
2)	Lambda-Cyhalothr	7.41	8.63	9324937	8571884	0.1735 0.1740
3)	Permethrin 1	8.40	9.51	941947	932211	0.1523 0.1609
4)	Permethrin 2	8.52	9.65	707358	645194	0.1612 0.1630
5)	Cyfluthrin 1	8.86	10.13	1533323	1335529	0.1647 0.1615
6)	Cyfluthrin 2	8.95	10.24	2192081	1823825	0.1762 0.1612
7)	Cyfluthrin 3	9.03	10.37	2602664	1428643	0.1676 0.1651
8)	Cypermethrin 1	9.29	10.53	7267150	6487036	0.8142 0.8112
9)	Cypermethrin 2	9.39	10.65	6450888	5735264	0.8198 0.8201
10)	Cypermethrin 3	9.47	10.73	8031430	5733034	0.8123 0.8355
11)	Asana/Fenvalerat	10.46	0.00	3713798	0	0.1645 N.D. #
12)	Asana/Fenvalerat	10.70	0.00	6158424	0	0.1695 N.D. #

Target Compounds

Data File : G:\LUCY\DATA\040804\0804080.D
Acq On : 8-5-04 22:12:35
Sample : PRYTH2-5 7/2/04
Misc : WATER
Quant Method : G:\LUCY\DATA\040804\PRTH.M

Vial: 80
Operator: SA
Inst : Lucy
Multiplr: 1.00



Administrative Record

**EPA METHOD 8081A
Organochlorine Pesticides
Raw Data**

APPL, INC.

Method Blank
EPA 8081A Pyrethroids WATER

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Blank Name/QCG: 040804W-73373 - 78222
Batch ID: S81PY-040804A

Sample Type	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
BLANK	Cypermethrin	Not detected	0.10	ug/L	8/4/04	8/5/04
BLANK	Esfenvalerate/Fenvalerate	Not detected	0.02	ug/L	8/4/04	8/5/04
BLANK	Lambda cyhalothrin	Not detected	0.02	ug/L	8/4/04	8/5/04
BLANK	Permethrin	Not detected	0.02	ug/L	8/4/04	8/5/04
BLANK	Surrogate: DECA	64.7	25-143	%	8/4/04	8/5/04
BLANK	Surrogate: TCmX	35.3	25-144	%	8/4/04	8/5/04

Run #: 59
Instrument: LUCY
Sequence: 040804
Initials: SA

Signal #1 : G:\LUCY\DATA\040804\0804059.D\ECD1A.CH Vial: 59
 Signal #2 : G:\LUCY\DATA\040804\0804059.D\ECD2B.CH
 Acq On : 8-5-04 17:04:12 Operator: SA
 Sample : 040804A BLK 2/1000 Inst : Lucy
 Misc : WATER Multiplr: 2.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 18:31 2004 Quant Results File: OCL.RES

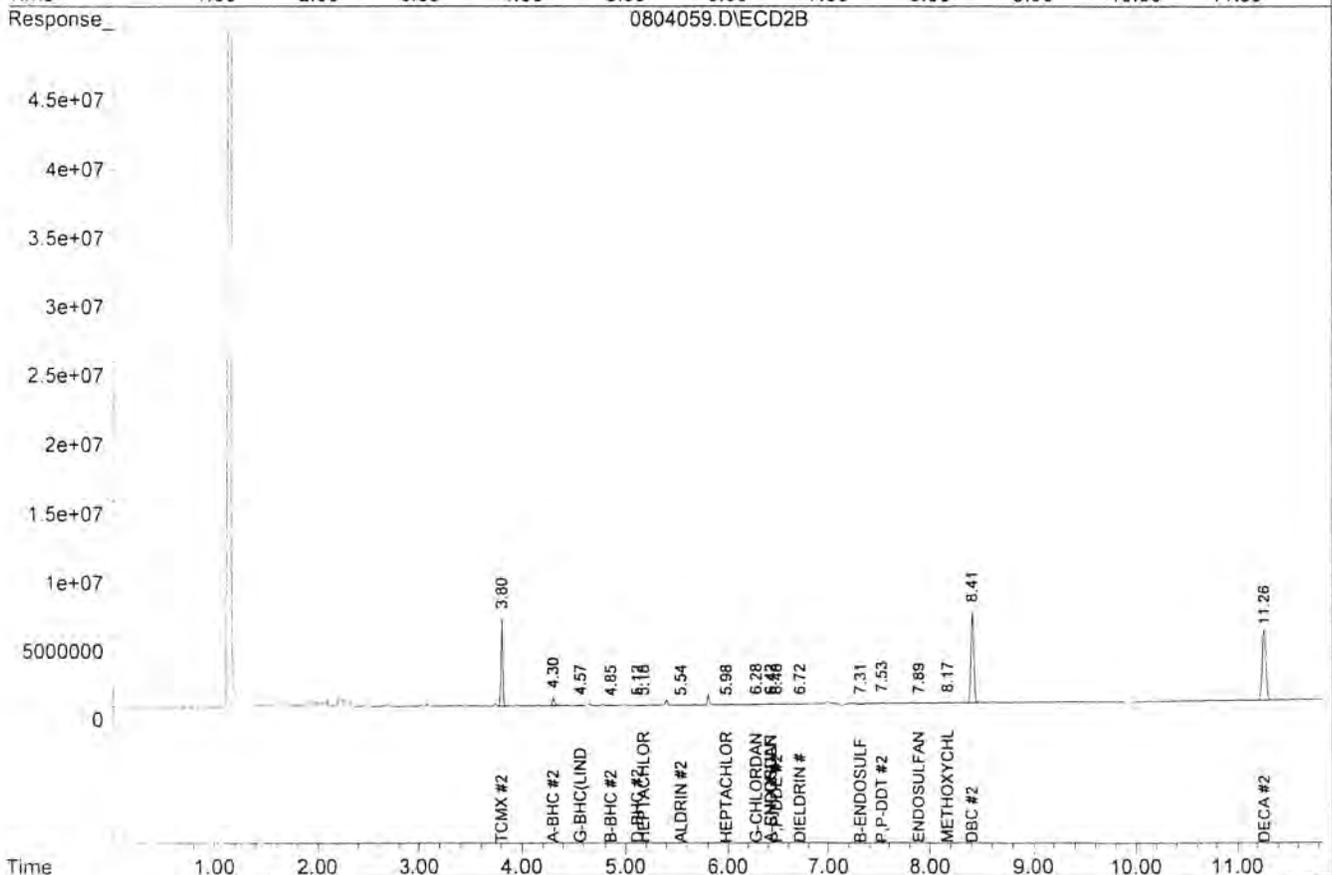
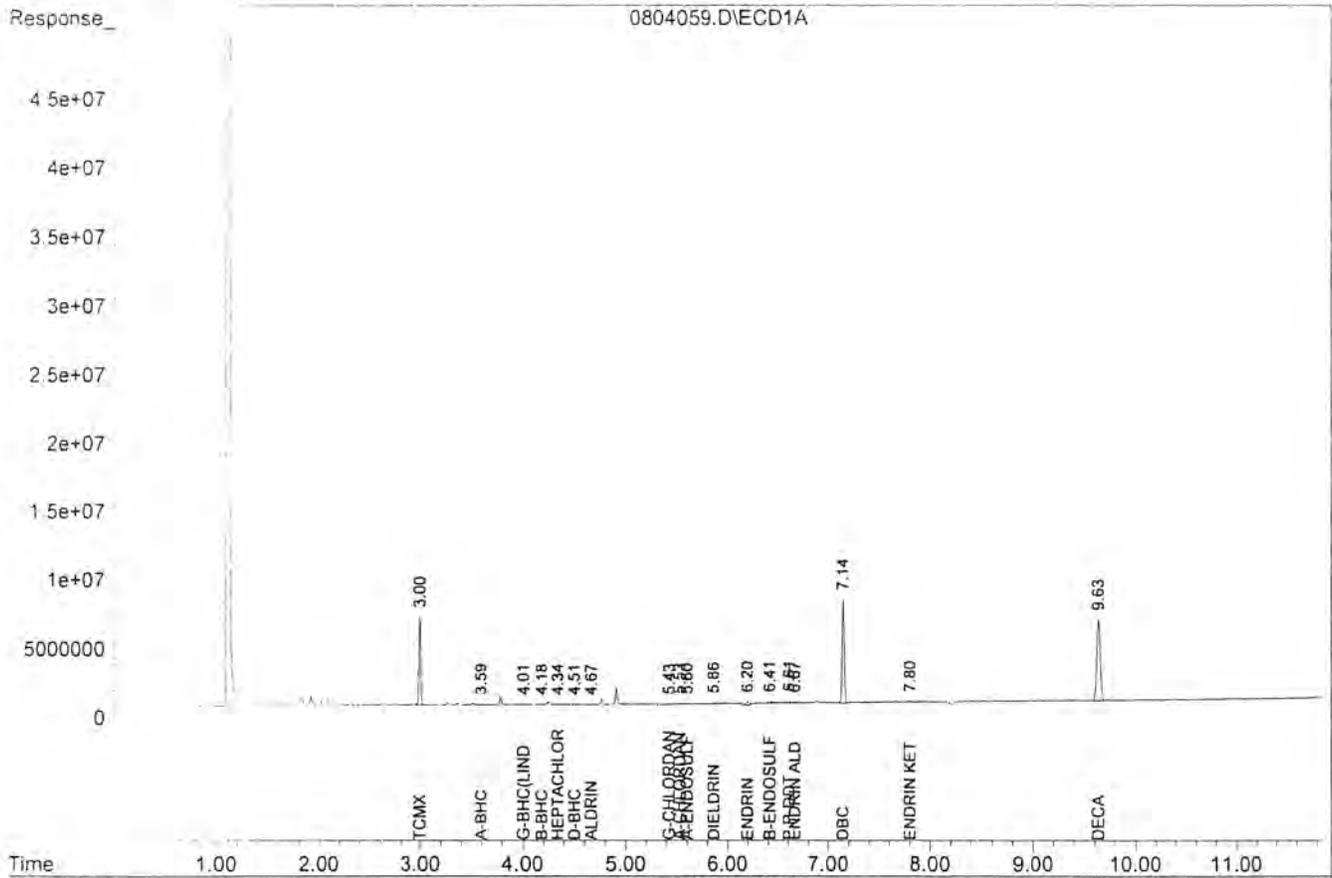
Quant Method : G:\LUCY\DATA\040804\OCL.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 11:03:57 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2
System Monitoring Compounds						
1) S TCMX	3.00	3.80	6383888	6431403	0.1057	0.1059
Surrogate Spike	0.300	Range	25 - 150	Recovery =	35.23%	35.30%
22) S DBC	7.14	8.41	7499420	6669397	0.1991	0.1946
Surrogate Spike	0.300			Recovery =	66.37%	64.87%
23) S DECA	9.63	11.26	5860652	5140969	0.1963	0.1942
Surrogate Spike	0.300	Range	25 - 150	Recovery =	65.43%	64.73%
Target Compounds						
2) TM A-BHC	3.59	4.30f	50837	593766	0.0006	0.0074 #
3) TM B-BHC	4.18	4.85	13249	15755	0.0005	0.0005
4) M G-BHC (LINDANE)	4.01	4.57	18078	87305	0.0002	0.0012 #
TM D-BHC	4.51	5.12	18856	24637	0.0003	0.0003 #
M HEPTACHLOR	4.34	5.18	20166	23807	0.0003	0.0004
7) M ALDRIN	4.67	5.54	12504	6663	0.0002	0.0001 #
8) TM HEPTACHLOR EPOXI	0.00	5.98	0	16065	N.D.	0.0003 #
9) TM G-CHLORDANE	5.43	6.28	24060	66350	0.0004	0.0012 #
10) TM A-ENDOSULFAN	5.60	6.42	7416	49601	0.0001	0.0010 #
11) TM A-CHLORDANE	5.53	6.42f	54629	49601	0.0010	0.0009
12) TM P,P-DDE	0.00	6.48	0	10788	N.D.	0.0002 #
13) M DIELDRIN	5.86	6.72	64729	13288	0.0011	0.0002 #
14) M ENDRIN	6.20	6.98	254659	195547	0.0053	N.D. #
15) TM B-ENDOSULFAN	6.41f	7.31	135033	56049	0.0027	0.0014 #
17) TM ENDRIN ALDEHYDE	6.67f	0.00	49391	0	0.0013	N.D. #
18) M P,P-DDT	6.61	7.53	156840	129649	0.0032	0.0030
19) TM ENDOSULFAN SULFA	0.00	7.89f	0	11366	N.D.	0.0003 #
20) TM ENDRIN KETONE	7.80	0.00	21521	0	0.0005	N.D. #
21) TM METHOXYCHLOR	0.00	8.17	0	91333	N.D.	0.0040 #
Target Compounds						
16) TM P,P-DDD	0.00	0.00	0	0	N.D.	N.D.

Data File : G:\LUCY\DATA\040804\0804059.D
Acq On : 8-5-04 17:04:12
Sample : 040804A BLK 2/1000
Misc : WATER
Quant Method : G:\LUCY\DATA\040804\OCL.M

Vial: 59
Operator: SA
Inst : Lucy
Multiplr: 2.00



Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804059.D\ECD1A.CH Vial: 59
 Signal #2 : G:\LUCY\DATA\040804\0804059.D\ECD2B.CH
 Acq On : 8-5-04 17:04:12 Operator: SA
 Sample : 040804A BLK 2/1000 Inst : Lucy
 Misc : WATER Multiplr: 2.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 18:41 2004 Quant Results File: PRTH.RES

Quant Method : G:\LUCY\DATA\040804\PRTH.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 16:39:19 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

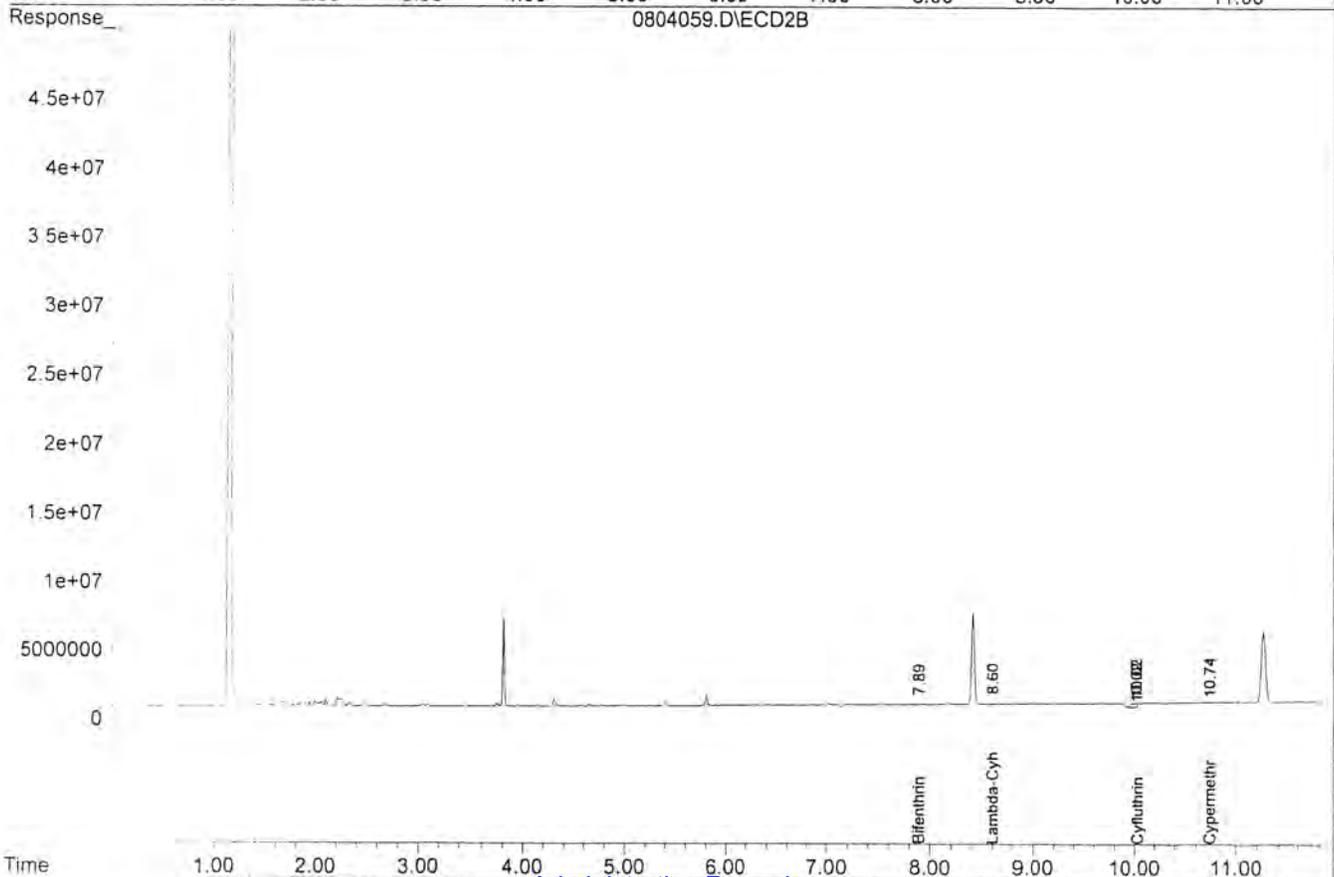
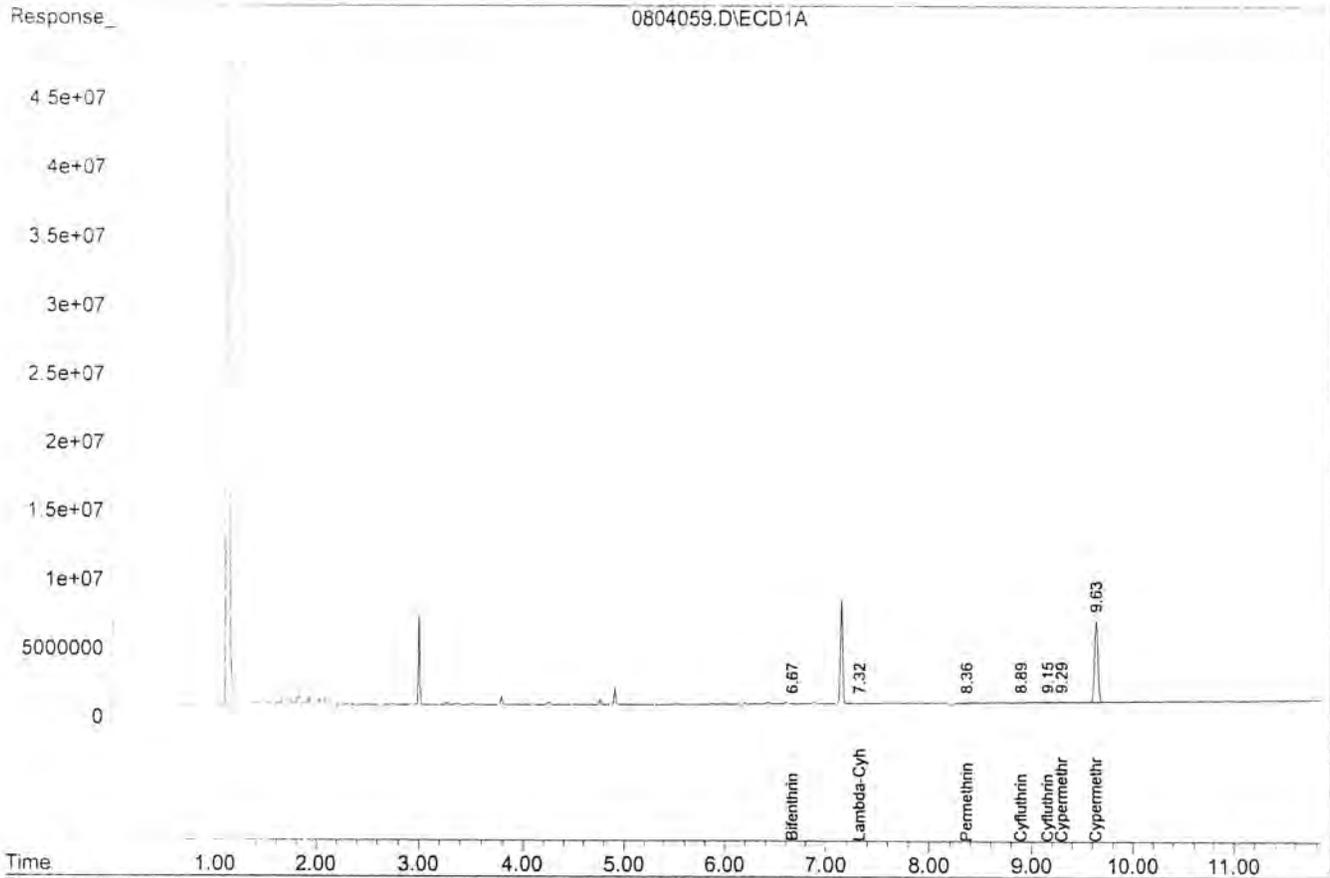
Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	t#1	t#2
Target Compounds						
1) Bifenthrin	6.67	7.89	49391	11366	0.0036	0.0009 #
2) Lambda-Cyhalothr	7.32	8.60	4796	44399	0.0002	0.0018 #
3) Permethrin 1	8.36	0.00	20101	0	0.0065	N.D. #
4) Permethrin 2	8.36	0.00	20101	0	0.0092	N.D. #
5) Cyfluthrin 1	8.89	10.02	8110	282615	0.0017	0.0683 #
6) Cyfluthrin 2	8.89	10.02	8110	282615	0.0013	0.0500 #
7) Cyfluthrin 3	9.15	0.00	15108	0	0.0019	N.D. #
8) Cypermethrin 1	9.29	10.74	7238	21706	0.0016	0.0054 #
9) Cypermethrin 2	9.29	10.74	7238	21706	0.0018	0.0062 #
10) Cypermethrin 3	9.63	10.74	5859192	21706	1.1852	0.0063 #
Target Compounds						
11) Asana/Fenvalerat	0.00	0.00	0	0	N.D.	N.D.
12) Asana/Fenvalerat	0.00	0.00	0	0	N.D.	N.D.

ND

Data File : G:\LUCY\DATA\040804\0804059.D
Acq On : 8-5-04 17:04:12
Sample : 040804A BLK 2/1000
Misc : WATER
Quant Method : G:\LUCY\DATA\040804\PRTH.M

Vial: 59
Operator: SA
Inst : Lucy
Multiplr: 2.00



Laboratory Control Spike Recovery EPA 8081A Pyrethroids WATER

APPL ID: 040804W-73373 LCS - 78222

Batch ID: S81PY-040804A

APPL Inc.

4203 West Swift Avenue

Fresno, CA 93722

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
Cypermethrin	1.00	0.945	94.5	65-135
Esfenvalerate/Fenvalerate	0.200	0.189	94.5	65-135
Lambda cyhalothrin	0.200	0.181	90.5	65-135
Permethrin	0.200	0.187	93.5	65-135
Surrogate: DECA	0.300	0.225	75.0	25-143
Surrogate: TCmX	0.300	0.113	37.7	25-144

Comments:

Primary	SPK
Extraction Date :	8/4/04
Analysis Date :	8/5/04
Instrument :	LUCY
Run :	60
Initials :	SA

Printed: 4/7/05 1:39:43 PM

APPL Standard LCS

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804060.D\ECD1A.CH Vial: 60
 Signal #2 : G:\LUCY\DATA\040804\0804060.D\ECD2B.CH
 Acq On : 8-5-04 17:18:53 Operator: SA
 Sample : 040804A LCS-1 2/1000 Inst : Lucy
 Misc : WATER Multiplr: 2.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 18:32 2004 Quant Results File: OCL.RES

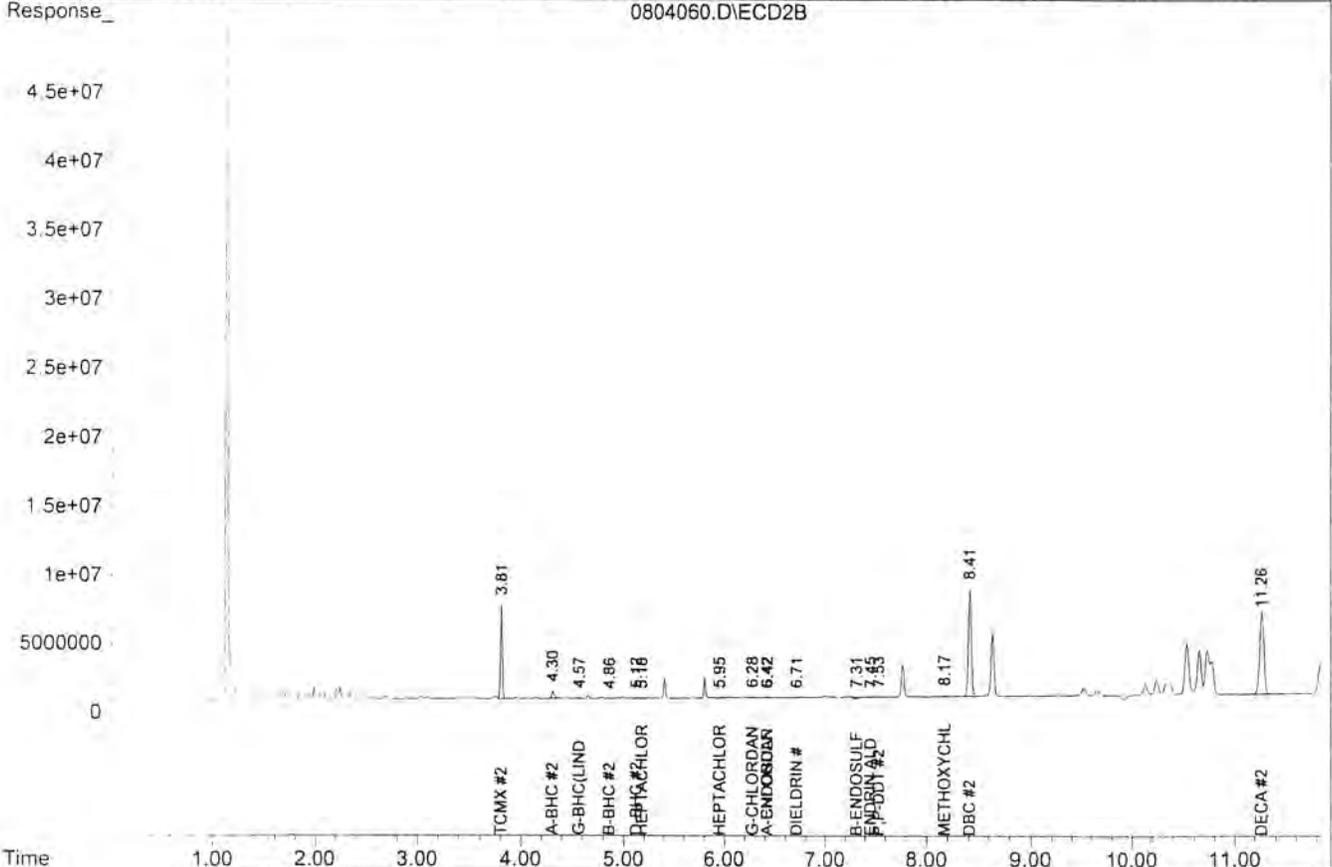
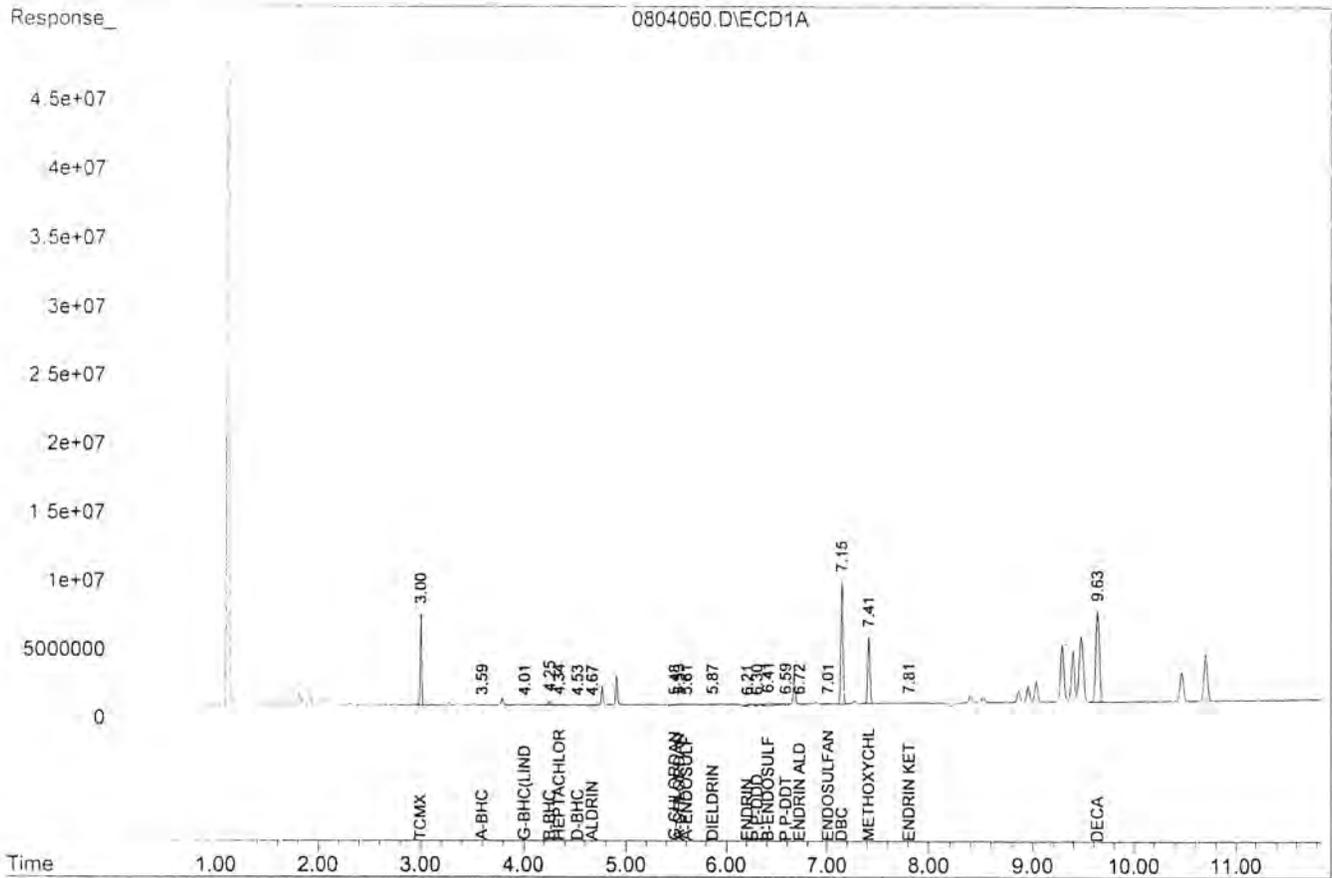
Quant Method : G:\LUCY\DATA\040804\OCL.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 11:03:57 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2
System Monitoring Compounds						
1) S TCMX	3.00	3.81	6709987	6849944	0.1111	0.1127
Surrogate Spike	0.300	Range 25 - 150	Recovery =		37.03%	37.57%
2) S DBC	7.15	8.41	8940530	7835232	0.2374	0.2286
Surrogate Spike	0.300		Recovery =		79.13%	76.20%
23) S DECA	9.63	11.26	6650438	5948421	0.2227	0.2248
Surrogate Spike	0.300	Range 25 - 150	Recovery =		74.23%	74.93%
Target Compounds						
2) TM A-BHC	3.59	4.30f	57681	540056	0.0007	0.0067 #
3) TM B-BHC	4.25f	4.86	286767	23221	0.0098	0.0008 #
4) M G-BHC (LINDANE)	4.01	4.57	22663	67939	0.0003	0.0009 #
) TM D-BHC	4.53	5.12	23221	41162	0.0003	0.0006 #
) M HEPTACHLOR	4.34	5.18	46684	20644	0.0007	0.0003 #
7) M ALDRIN	4.67	0.00	15411	0	0.0003	N.D. #
8) TM HEPTACHLOR EPOXI	0.00	5.95	0	48532	N.D.	0.0008 #
9) TM G-CHLORDANE	5.48f	6.28	36278	58309	0.0006	0.0010 #
10) TM A-ENDOSULFAN	5.61	6.42	17708	66992	0.0004	0.0014 #
11) TM A-CHLORDANE	5.53	6.42f	72639	66992	0.0013	0.0012
13) M DIELDRIN	5.87	6.71	58586	17960	0.0010	0.0003 #
15) TM B-ENDOSULFAN	6.41f	7.31	228035	105651	0.0045	0.0025 #
16) TM P,P-DDD	6.30	0.00	108151	0	0.0022	N.D. #
17) TM ENDRIN ALDEHYDE	6.72	7.45	35979	31713	0.0010	0.0009
18) M P,P-DDT	6.59	7.53	94288	11947	0.0019	0.0003 #
19) TM ENDOSULFAN SULFA	7.01f	0.00	28394	0	0.0007	N.D. #
20) TM ENDRIN KETONE	7.81	0.00	22770	0	0.0005	N.D. #
21) TM METHOXYCHLOR	7.41	8.17	4872756	108316	0.2121	0.0048 #
Target Compounds						
12) TM P,P-DDE	0.00	0.00	0	0	N.D.	N.D.
14) M ENDRIN	6.21	7.01	130969	99064	0.0027	N.D. #

Data File : G:\LUCY\DATA\040804\0804060.D
Acq On : 8-5-04 17:18:53
Sample : 040804A LCS-1 2/1000
Misc : WATER
Quant Method : G:\LUCY\DATA\040804\OCL.M

Vial: 60
Operator: SA
Inst : Lucy
Multiplr: 2.00



Signal #1 : G:\LUCY\DATA\040804\0804060.D\ECD1A.CH Vial: 60
 Signal #2 : G:\LUCY\DATA\040804\0804060.D\ECD2B.CH
 Acq On : 8-5-04 17:18:53 Operator: SA
 Sample : 040804A LCS-1 2/1000 Inst : Lucy
 Misc : WATER Multiplr: 2.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 18:41 2004 Quant Results File: PPTH.RES

Quant Method : G:\LUCY\DATA\040804\PPTH.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 16:39:19 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	t#1	t#2

Target Compounds						
1) Bifenthrin	6.67	7.77	2557522	2369617	0.1873	0.1806
2) Lambda-Cyhalothr	7.41	8.63	4872756	4619386	0.1813	0.1875
3) Permethrin 1	8.40	9.51	598807	547706	0.1936	0.1890
4) Permethrin 2	8.53	9.65	396631	389611	0.1808	0.1968
5) Cyfluthrin 1	8.87	10.13	894029	814781	0.1921	0.1970
6) Cyfluthrin 2	8.95	10.24	1187185	1089234	0.1908	0.1925
7) Cyfluthrin 3	9.04	10.37	1512407	828392	0.1948	0.1915
8) Cypermethrin 1	9.29	10.53	4171556	3697535	0.9347	0.9248
9) Cypermethrin 2	9.39	10.65	3693589	3217875	0.9388	0.9202
10) Cypermethrin 3	9.47	10.73	4757111	3236123	0.9623	0.9432
11) Asana/Fenvalerat	10.46	0.00	2100191	0	0.1860	N.D. #
Asana/Fenvalerat	10.70	0.00	3471034	0	0.1910	N.D. #

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0.187
0.195
0.945
0.189

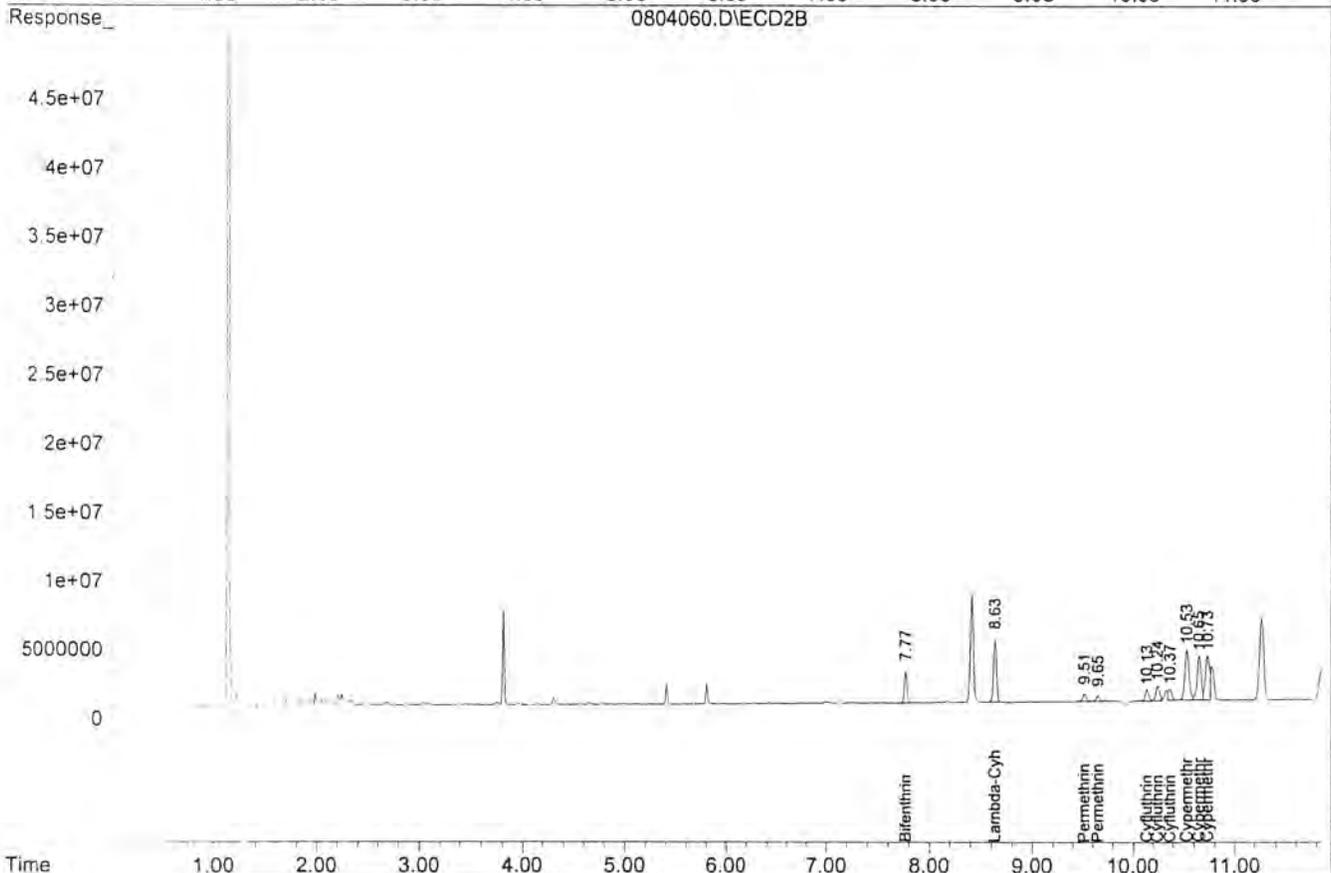
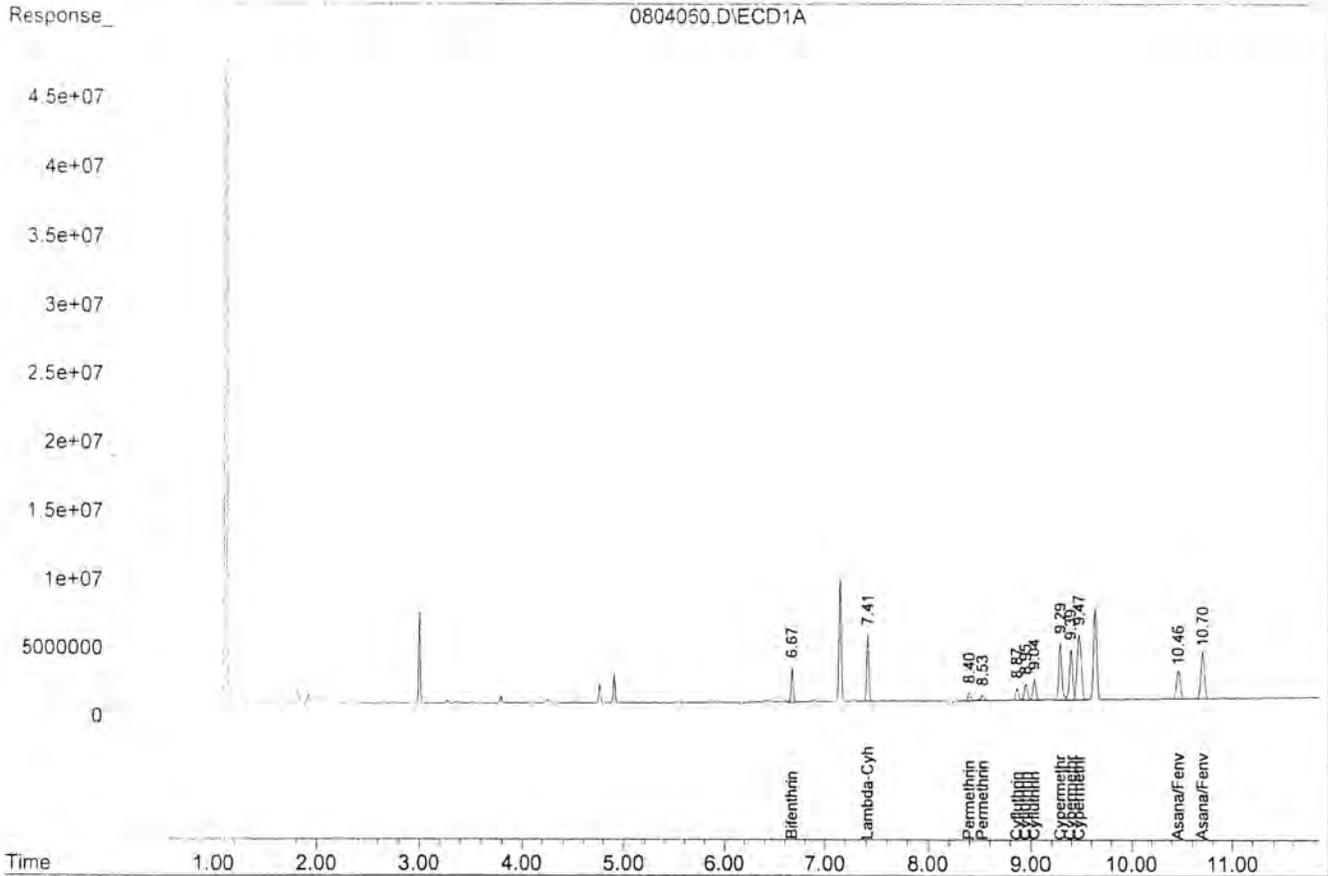
Target Compounds

*Spk @ 0.200
+ 1.00*

Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\040804\0804060.D
 Acq On : 8-5-04 17:18:53
 Sample : 040804A LCS-1 2/1000
 Misc : WATER
 Quant Method : G:\LUCY\DATA\040804\PRTH.M

Vial: 60
 Operator: SA
 Inst : Lucy
 Multiplr: 2.00



Administrative Record

Matrix Spike Recoveries

EPA 8081A Pyrethroids WATER

APPL ID: 040804W-73373 MS - 78222
 Batch ID: S81PY-040804A
 Sample ID: AP73373

APPL Inc.
 4203 West Swift Avenue
 Fresno, CA 93722

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
Cypermethrin	2.00	ND	1.80	1.72	90.0	86.0	65-135	4.5	25
Esfenvalerate/Fenvalerate	0.400	ND	0.365	0.348	91.2	87.0	65-135	4.8	25
Lambda cyhalothrin	0.400	ND	0.358	0.338	89.5	84.5	65-135	5.7	25
Permethrin	0.400	ND	0.376	0.474	94.0	118	65-135	23.1	25
Surrogate: DECA	0.600	NA	0.422	0.415	70.3	69.2	25-143		
Surrogate: TCmX	0.600	NA	0.339	0.299	56.5	49.8	25-144		

Comments:

	<u>Primary</u>	<u>SPK</u>	<u>DUP</u>
Extraction Date :	8/4/04	8/4/04	8/4/04
Analysis Date :	8/5/04	8/5/04	8/5/04
Instrument :	LUCY	LUCY	LUCY
Run :	61	62	
Initials :	SA		

Printed: 4/7/05 1:39:44 PM
 APPL Standard MSD

Signal #1 : G:\LUCY\DATA\040804\0804061.D\ECD1A.CH Vial: 61
 Signal #2 : G:\LUCY\DATA\040804\0804061.D\ECD2B.CH
 Acq On : 8-5-04 17:33:40 Operator: SA
 Sample : AP73373W02 MS 2/500 Inst : Lucy
 Misc : WATER Multiplr: 4.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 18:32 2004 Quant Results File: OCL.RES

Quant Method : G:\LUCY\DATA\040804\OCL.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 11:03:57 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

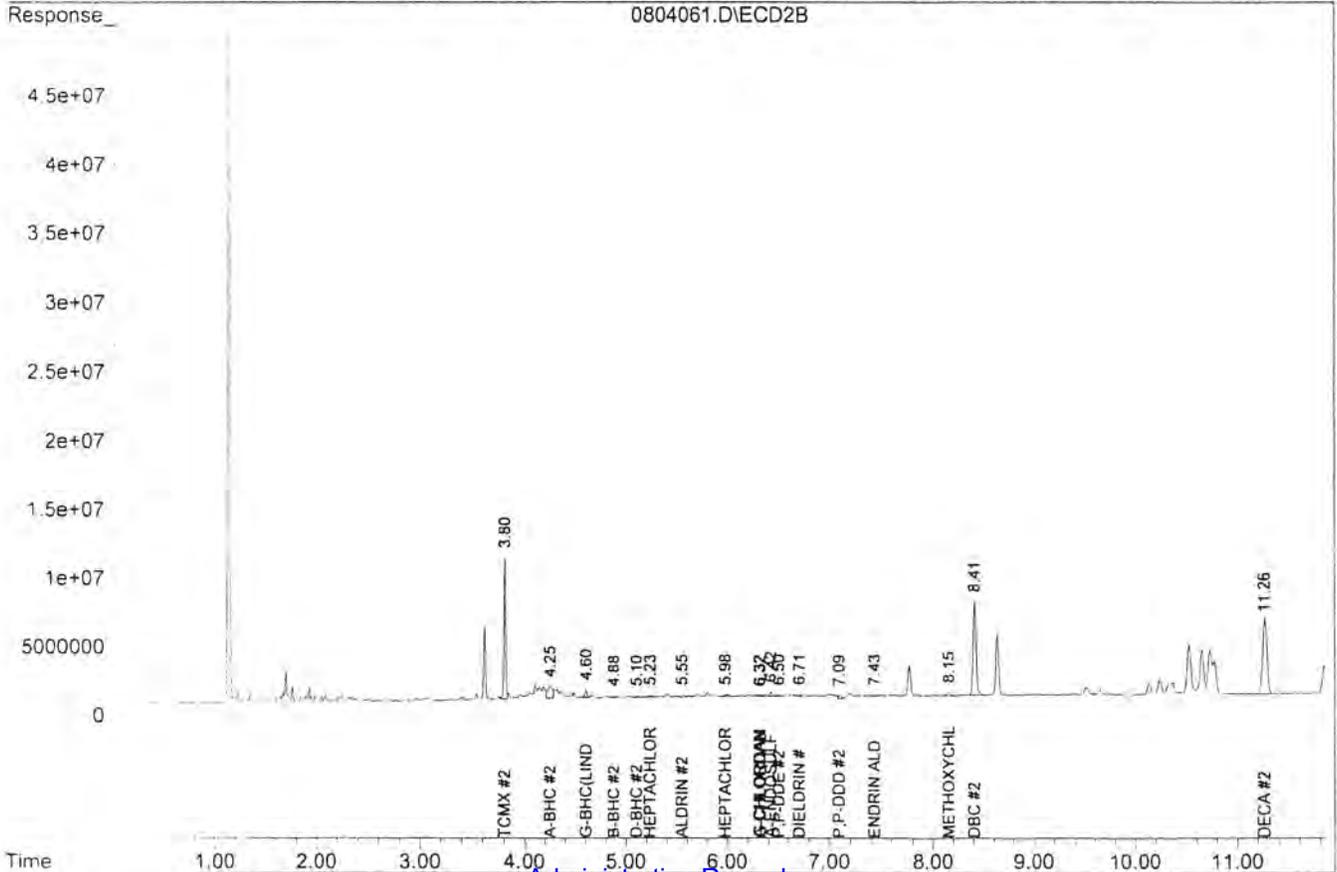
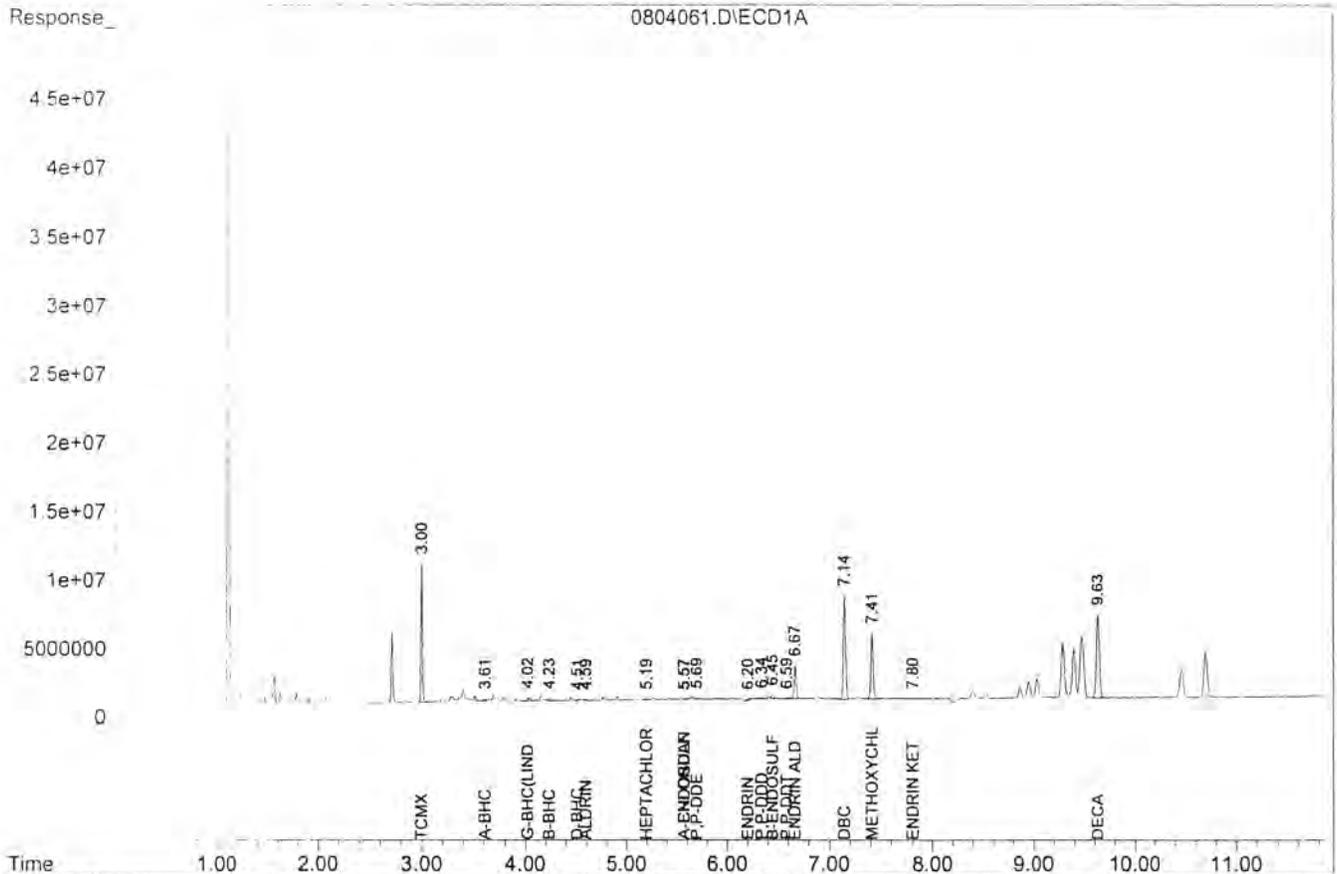
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2
System Monitoring Compounds						
1) S TCMX	3.00	3.80	10152494	10310734	0.3363	<u>0.3394</u>
Surrogate Spike	0.600	Range	25 - 150	Recovery =	56.05%	56.57%
22) S DBC	7.14	8.41	7571479	6807628	0.4021	0.3972
Surrogate Spike	0.600			Recovery =	67.02%	66.20%
23) S DECA	9.63	11.26	6069926	5579243	0.4065	<u>0.4216</u>
Surrogate Spike	0.600	Range	25 - 150	Recovery =	67.75%	70.27%
Target Compounds						
2) TM A-BHC	3.61	4.25	174116	860608	0.0044	0.0214 #
3) TM B-BHC	4.23	4.88f	172558	118344	0.0116	0.0080 #
4) M G-BHC (LINDANE)	4.02f	4.60	241865	588566	0.0067	0.0163 #
TM D-BHC	4.51	5.10	93556	131786	0.0026	0.0036 #
6) M HEPTACHLOR	0.00	5.23	0	173758	N.D.	0.0053 #
7) M ALDRIN	4.59f	5.55	119503	166248	0.0039	0.0054 #
8) TM HEPTACHLOR EPOXI	5.19	5.98	62747	164652	0.0021	0.0055 #
9) TM G-CHLORDANE	0.00	6.32	0	103188	N.D.	0.0037 #
10) TM A-ENDOSULFAN	5.57	6.42	54103	323600	0.0021	0.0135 #
11) TM A-CHLORDANE	5.57	6.32f	54103	103188	0.0019	0.0038 #
12) TM P,P-DDE	5.69	6.50	83262	109778	0.0028	0.0040 #
13) M DIELDRIN	0.00	6.71	0	137898	N.D.	0.0051 #
15) TM B-ENDOSULFAN	6.45	0.00	274869	0	0.0109	N.D. #
16) TM P,P-DDD	6.34	7.09	119314	217803	0.0049	0.0096 #
17) TM ENDRIN ALDEHYDE	6.67f	7.43	2404534	83733	0.1297	0.0049 #
18) M P,P-DDT	6.59	0.00	55624	0	0.0023	N.D. #
20) TM ENDRIN KETONE	7.80	0.00	46935	0	0.0020	N.D. #
21) TM METHOXYCHLOR	7.41	8.15	4809309	236473	0.4186	0.0209 #
Target Compounds						
14) M ENDRIN	6.20	7.00	134846	116615	0.0057	N.D. #
19) TM ENDOSULFAN SULFA	0.00	0.00	0	0	N.D.	N.D.

NT
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Quantitation Report (Not Reviewed)

Data File : G:\LUCY\DATA\040804\0804061.D
 Acq On : 8-5-04 17:33:40
 Sample : AP73373W02 MS 2/500
 Misc : WATER
 Quant Method : G:\LUCY\DATA\040804\OCL.M

Vial: 61
 Operator: SA
 Inst : Lucy
 Multiplr: 4.00



Administrative Record

Signal #1 : G:\LUCY\DATA\040804\0804061.D\ECD1A.CH Vial: 61
 Signal #2 : G:\LUCY\DATA\040804\0804061.D\ECD2B.CH
 Acq On : 8-5-04 17:33:40 Operator: SA
 Sample : AP73373W02 MS 2/500 Inst : Lucy
 Misc : WATER Multiplr: 4.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 18:42 2004 Quant Results File: PPTH.RES

Quant Method : G:\LUCY\DATA\040804\PRTH.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 16:39:19 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	t#1	t#2
Target Compounds						
1) Bifenthrin	6.67	7.76	2404534	2249536	0.3523	0.3428
2) Lambda-Cyhalothr	7.41	8.63	4809309	4494440	0.3579	0.3650
3) Permethrin 1	8.40	9.51	600546	550256	0.3883	0.3798
4) Permethrin 2	8.52	9.65	399797	365566	0.3644	0.3694
5) Cyfluthrin 1	8.86	10.13	839873	784441	0.3610	0.3794
6) Cyfluthrin 2	8.95	10.24	1190573	988031	0.3827	0.3493
7) Cyfluthrin 3	9.03	10.37	1399818	743926	0.3605	0.3439
8) Cypermethrin 1	9.29	10.52	4005323	3539122	1.7949	1.7703
9) Cypermethrin 2	9.39	10.65	3513242	3152407	1.7860	1.8030
10) Cypermethrin 3	9.47	10.73	4522584	3107346	1.8296	1.8113
11) Asana/Fenvalerat	10.46	0.00	2038998	0	0.3612	N.D. #
12) Asana/Fenvalerat	10.70	0.00	3358421	0	0.3696	N.D. #

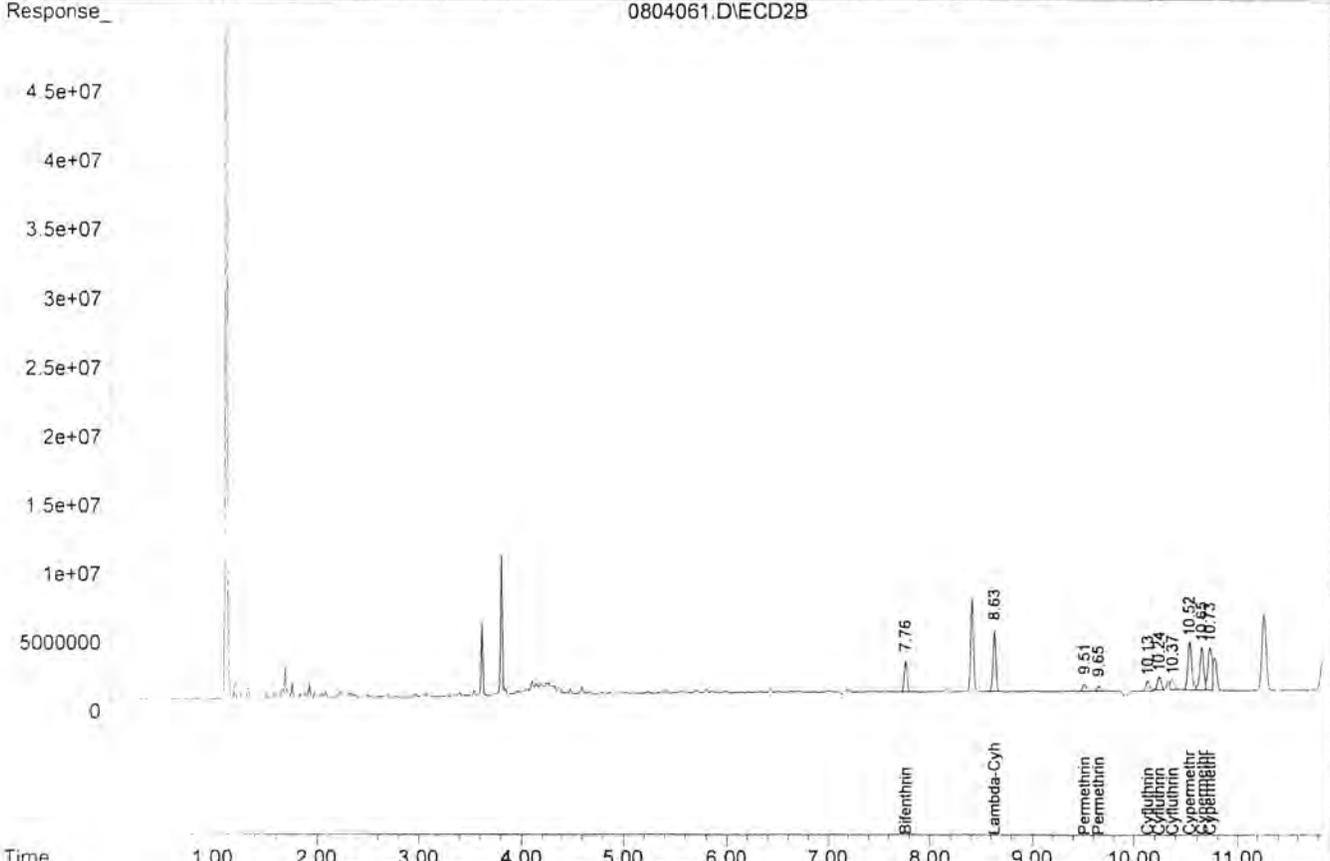
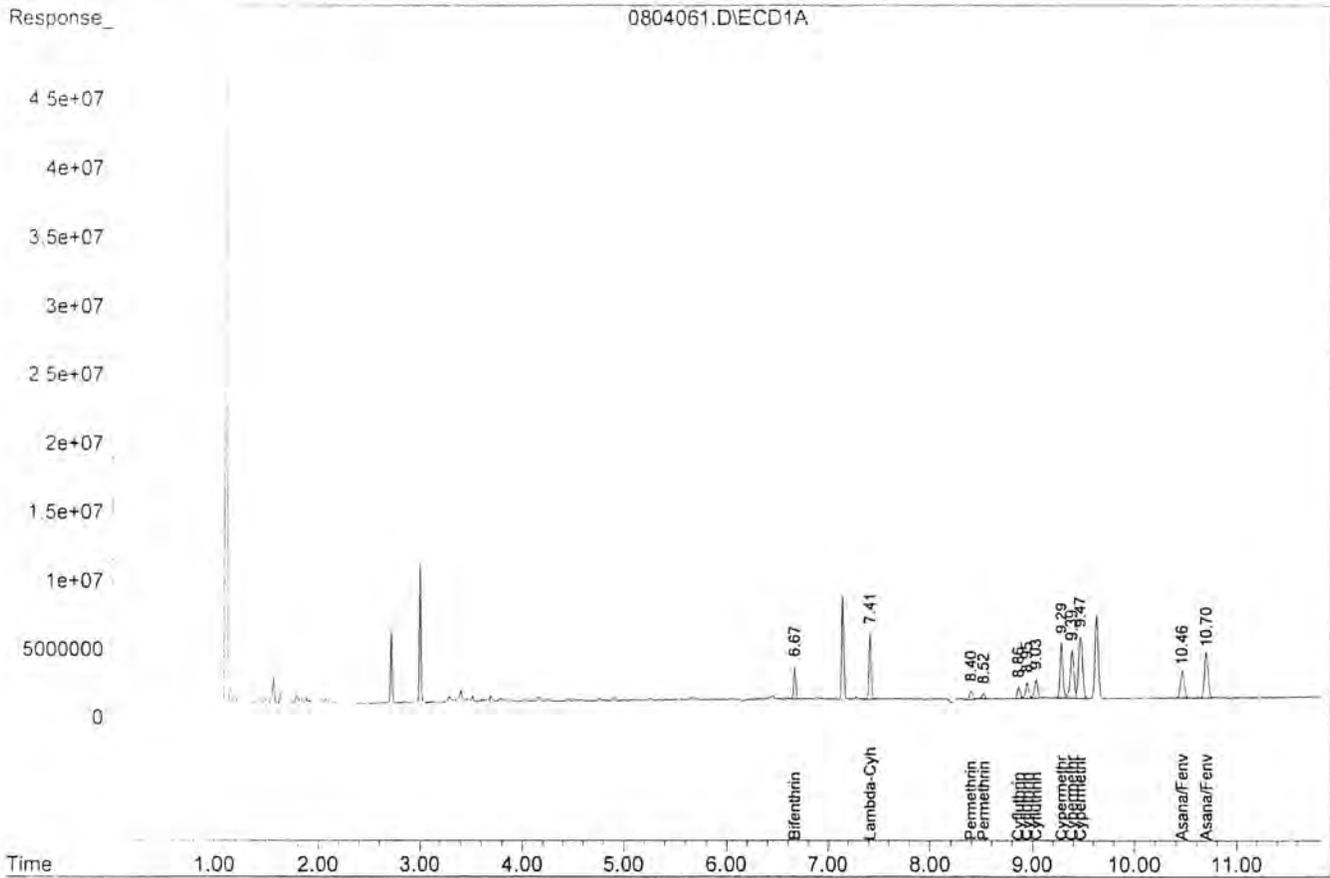
↓
 0.376
 0.568
 1.80
 0.365

Target Compounds

*Sph @ 0.400
 ↓ 2.00*

Data File : G:\LUCY\DATA\040804\0804061.D
Acq On : 8-5-04 17:33:40
Sample : AP73373W02 MS 2/500
Misc : WATER
Quant Method : G:\LUCY\DATA\040804\PRTH.M

Vial: 61
Operator: SA
Inst : Lucy
Multiplr: 4.00



Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804062.D\ECD1A.CH Vial: 62
 Signal #2 : G:\LUCY\DATA\040804\0804062.D\ECD2B.CH
 Acq On : 8-5-04 17:48:19 Operator: SA
 Sample : AP73373W02 MSD 2/500 Inst : Lucy
 Misc : WATER Multiplr: 4.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 18:33 2004 Quant Results File: OCL.RES

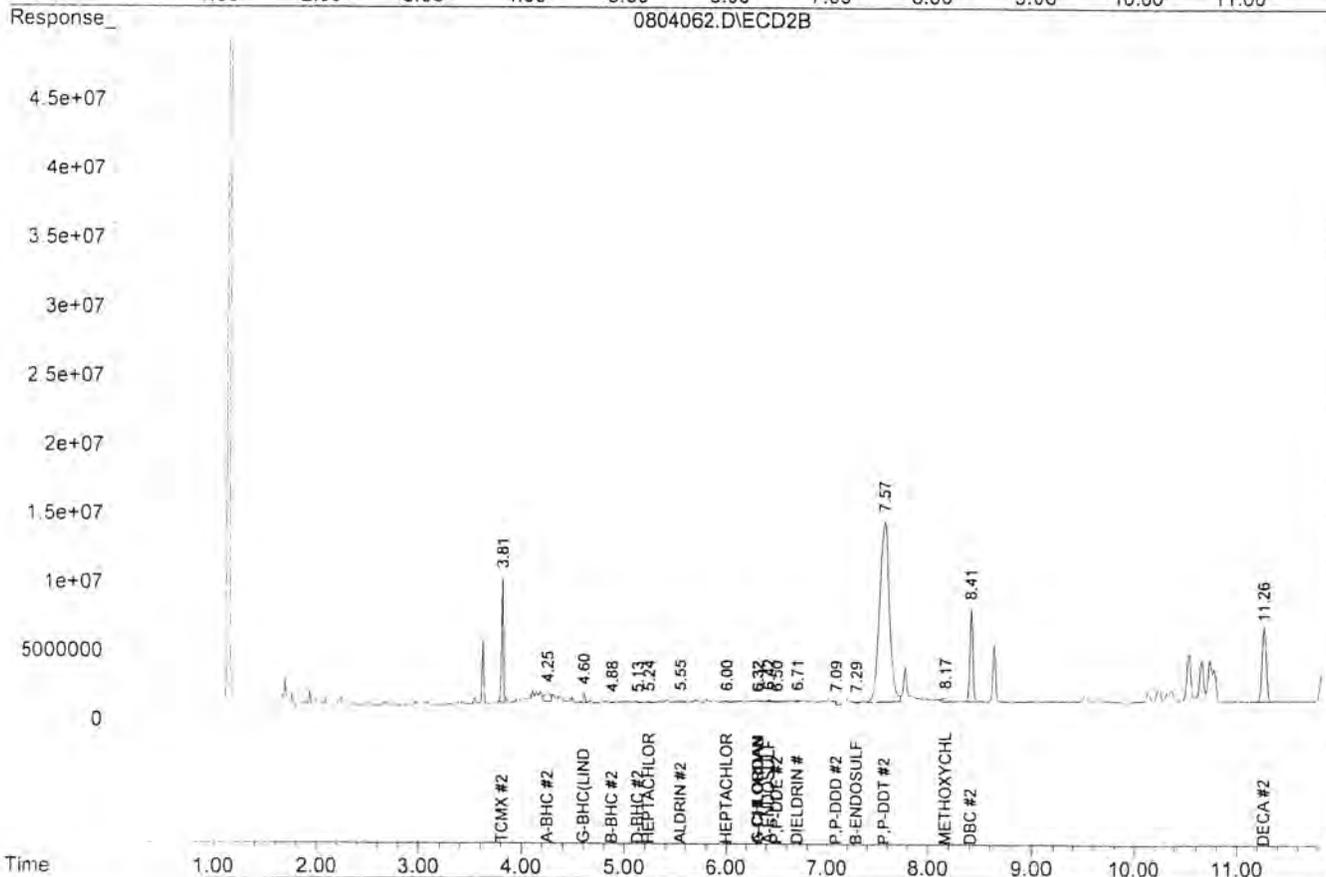
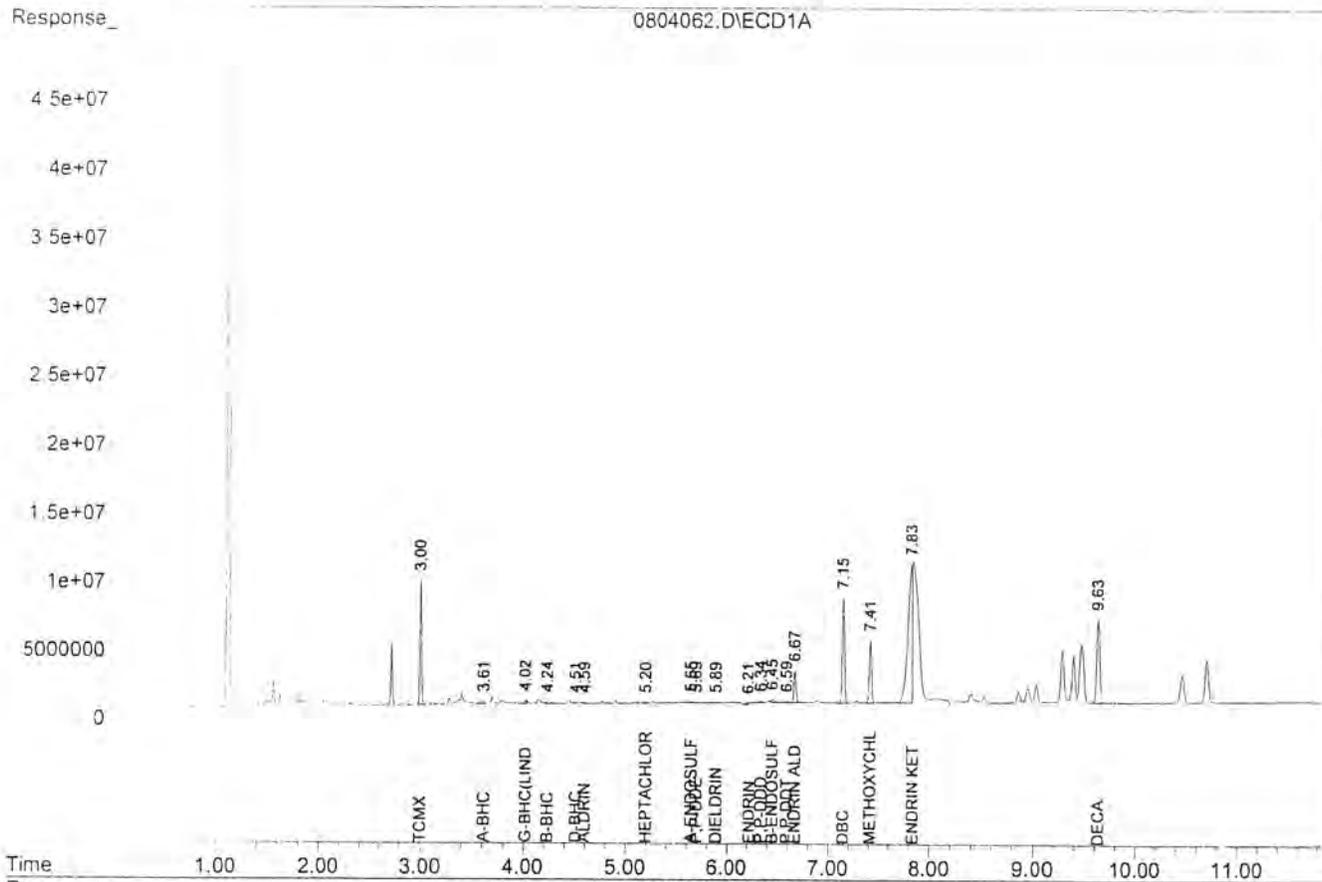
Quant Method : G:\LUCY\DATA\040804\OCL.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 11:03:57 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2
System Monitoring Compounds						
1) S TCMX	3.00	3.81	9075801	9081853	0.3006	0.2990
Surrogate Spike	0.600	Range	25 - 150	Recovery =	50.10%	49.83%
22) S DBC	7.15	8.41	7689896	6747713	0.4084	0.3937
Surrogate Spike	0.600			Recovery =	68.07%	65.62%
23) S DECA	9.63	11.26	6093689	5489528	0.4081	0.4148
Surrogate Spike	0.600	Range	25 - 150	Recovery =	68.02%	69.13%
Target Compounds						
2) TM A-BHC	3.61	4.25	205694	707367	0.0052	0.0176 #
3) TM B-BHC	4.24	4.88f	152798	108392	0.0104	0.0073 #
7) M G-BHC (LINDANE)	4.02f	4.60	253044	618532	0.0070	0.0171 #
TM D-BHC	4.51	5.13	78688	70449	0.0021	0.0019
6) M HEPTACHLOR	0.00	5.24	0	149254	N.D.	0.0045 #
7) M ALDRIN	4.59f	5.55	104101	151043	0.0034	0.0049 #
8) TM HEPTACHLOR EPOXI	5.20	6.00	56815	117469	0.0019	0.0039 #
9) TM G-CHLORDANE	0.00	6.32	0	64119	N.D.	0.0023 #
10) TM A-ENDOSULFAN	5.65f	6.42	109329	172628	0.0043	0.0072 #
11) TM A-CHLORDANE	0.00	6.32f	0	64119	N.D.	0.0024 #
12) TM P,P-DDE	5.69	6.50	75399	41587	0.0026	0.0015 #
13) M DIELDRIN	5.89	6.71	34450	121873	0.0012	0.0045 #
15) TM B-ENDOSULFAN	6.45	7.29	231148	100519	0.0091	0.0048 #
16) TM P,P-DDD	6.34f	7.09	112393	239775	0.0046	0.0106 #
17) TM ENDRIN ALDEHYDE	6.67f	0.00	2323959	0	0.1253	N.D. #
18) M P,P-DDT	6.59	7.57f	89037	13177308	0.0037	0.6105 #
20) TM ENDRIN KETONE	7.83f	0.00	10080081	0	0.4317	N.D. #
21) TM METHOXYCHLOR	7.41	8.17	4538264	248185	0.3950	0.0219 #
Target Compounds						
14) M ENDRIN	6.21	7.01	141636	94729	0.0059	N.D. #
19) TM ENDOSULFAN SULFA	0.00	0.00	0	0	N.D.	N.D.

Data File : G:\LUCY\DATA\040804\0804062.D
Acq On : 8-5-04 17:48:19
Sample : AP73373W02 MSD 2/500
Misc : WATER
Quant Method : G:\LUCY\DATA\040804\OCL.M

Vial: 62
Operator: SA
Inst : Lucy
Multiplr: 4.00



Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804062.D\ECD1A.CH Vial: 62
 Signal #2 : G:\LUCY\DATA\040804\0804062.D\ECD2B.CH
 Acq On : 8-5-04 17:48:19 Operator: SA
 Sample : AP73373W02 MSD 2/500 Inst : Lucy
 Misc : WATER Multiplr: 4.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 18:42 2004 Quant Results File: PPTH.RES

Quant Method : G:\LUCY\DATA\040804\PRTH.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 16:39:19 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	t#1	t#2
Target Compounds						
1) Bifenthrin	6.67	7.77	2323959	2235909	0.3405	0.3408
2) Lambda-Cyhalothr	7.41	8.63	4538264	4156389	0.3377	0.3375
3) Permethrin 1	8.40	9.51	806885	524670	0.5217	0.3622 #
4) Permethrin 2	8.52	9.65	467595	357271	0.4262	0.3610
5) Cyfluthrin 1	8.87	10.13	802138	736469	0.3447	0.3562
6) Cyfluthrin 2	8.95	10.24	1069590	969812	0.3439	0.3428
7) Cyfluthrin 3	9.04	10.37	1321182	789612	0.3403	0.3650
8) Cypermethrin 1	9.29	10.53	3872754	3466346	1.7355	1.7339
9) Cypermethrin 2	9.39	10.65	3391557	2997450	1.7241	1.7144
10) Cypermethrin 3	9.47	10.73	4239247	2991913	1.7150	1.7440
11) Asana/Fenvalerat	10.46	0.00	1972419	0	0.3494	N.D. #
Asana/Fenvalerat	10.70	0.00	3147361	0	0.3464	N.D. #

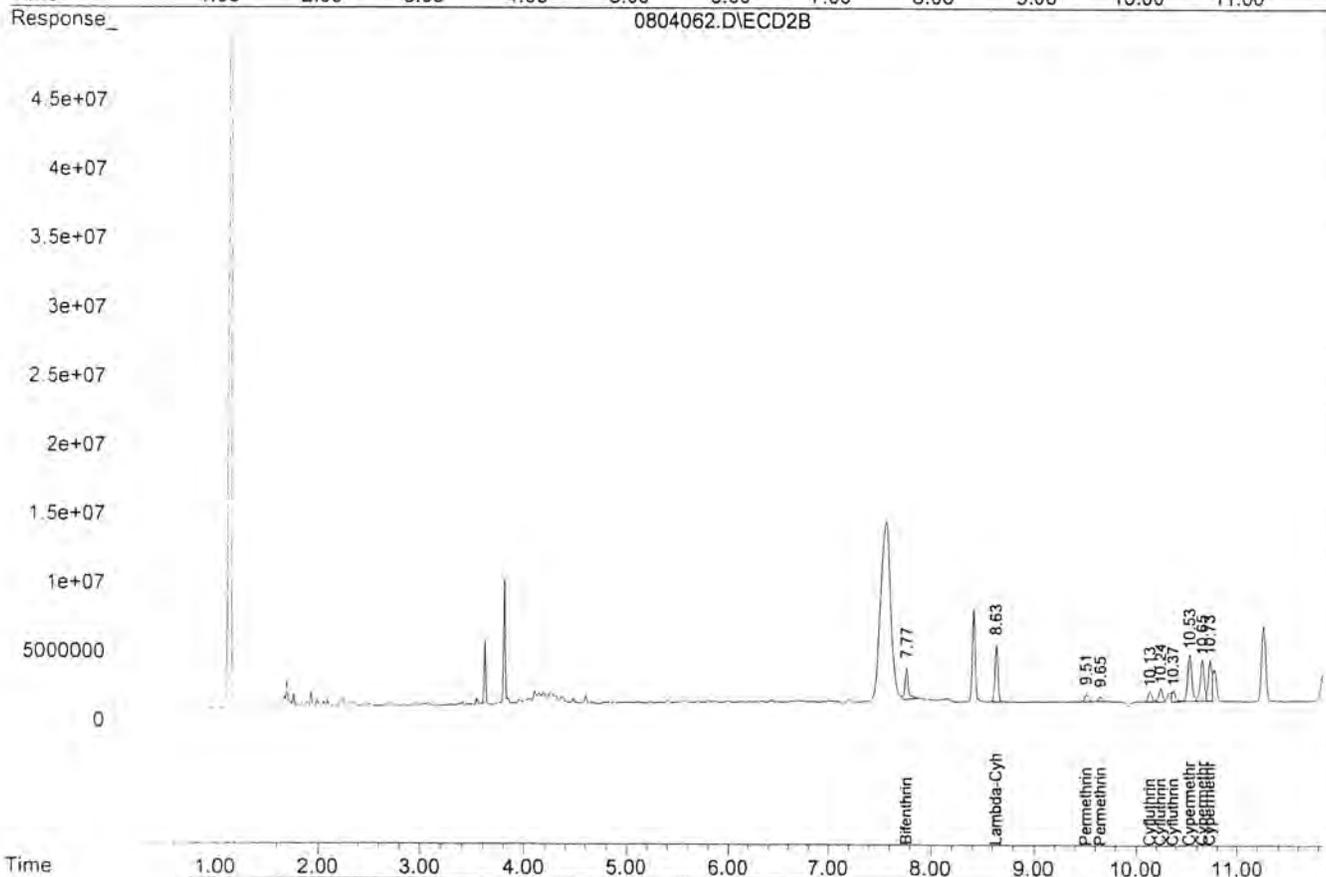
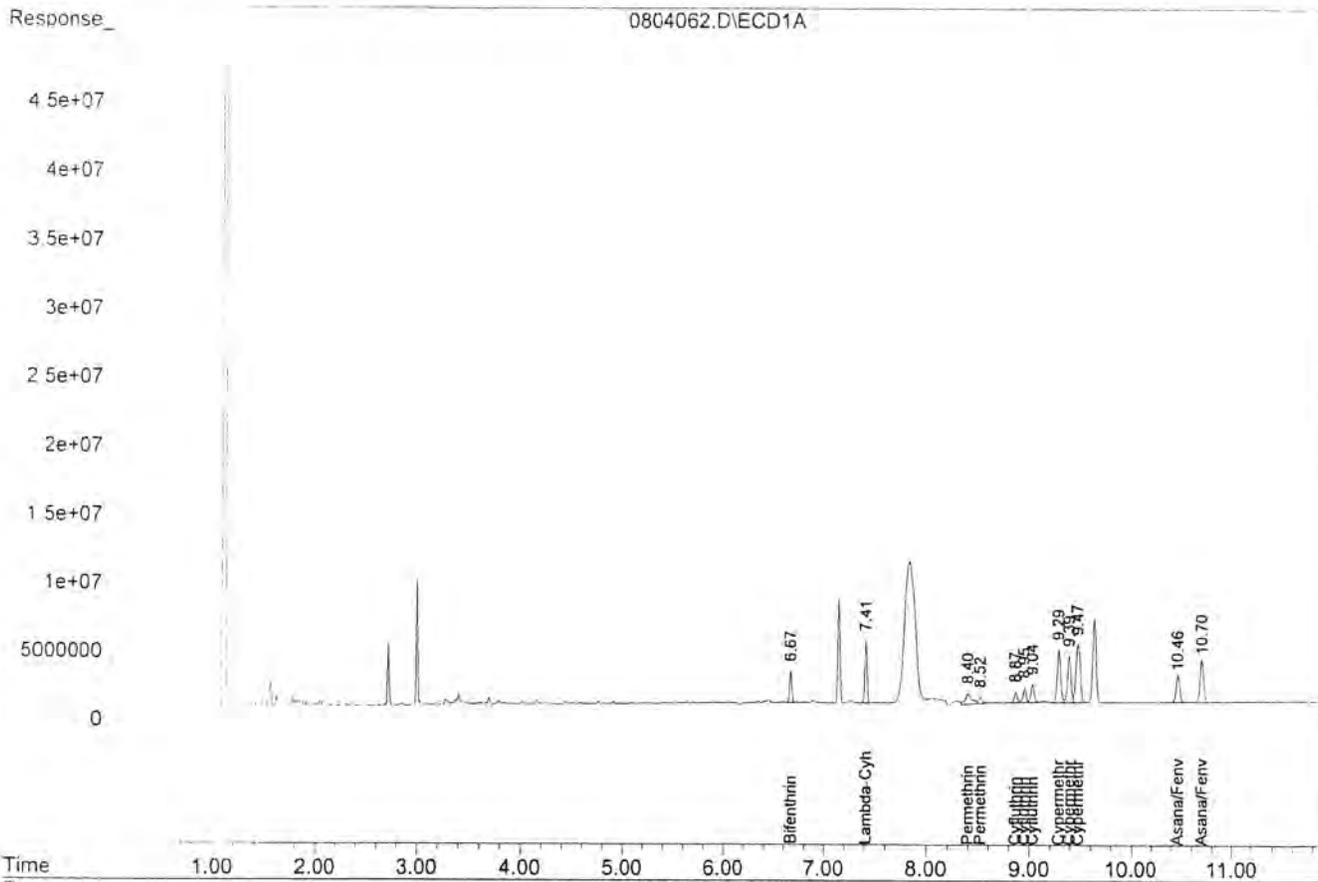
↓
 0.474
 0.343
 1.72
 0.348

Target Compounds

Sph @ 0.400
 & 200

Data File : G:\LUCY\DATA\040804\0804062.D
Acq On : 8-5-04 17:48:19
Sample : AP73373W02 MSD 2/500
Misc : WATER
Quant Method : G:\LUCY\DATA\040804\PRTH.M

Vial: 62
Operator: SA
Inst : Lucy
Multiplr: 4.00



PREPARED SPIK/SURR/STD
LOG BOOK # 20

COMPOUND	CONCENTRATION IN MIX (ug/ml)	CONCENTRATION OF STOCK (ug/ml)	STOCK SOURCE	FINAL VOLUME (ml)	DATE/INITIA
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HERBICIDE SPECIAL SURROGATE

2,4 DCPA	3.0 ug/ml	1000 ug/ml	300 ml ACCUSTANDARD OPENED: 6/2/04 EXP: 4/14/05	100 ml ACETONE # CJ672	JT 6/2/04 Sol'n exp: 9/2/04
DICAMBA	0.75 ug/ml	1000 ug/ml	75 ml ACCUSTANDARD OPENED: 6/2/04 EXP: 4/14/05		

504.1/8011 Low METHOD STD.

EDB 1,2,3 TCP DBCP	0.035 ug/ml	0.35 ug/ml	1000 ug/ml BAD STANDARD 504/8011 HIGH METH STD. PREP: 6/1/04 EXP: 12/1/04	10 ml MeOH # 17618	JT 6/2/04 Sol'n exp: 12/1/04
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504.1/8011 Low SPIKE STD.

EDB 1,2,3 TCP DBCP	0.02 ug/ml	0.250 ug/ml	800 ml BAD STANDARD 504.1/8011 HIGH SPIKE STD. PREP: 6/1/04 EXP: 9/1/04	10 ml MeOH # 17618	JT 6/2/04 Sol'n exp: 9/1/04
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OCL Level 4 Cal. Curve

Level 4	0.1500	10 ug/ml	1500 ug/ml OCL stock pp'd 2/13/4 Exp. 2/13/5 Pln exp. 12/04	100 ml Hex Lot # 43351	6/3/4
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PREPARED SPK/SURR/STD
LOG BOOK # 21

COMPOUND	CONCENTRATION IN MIX (ug/ml)	CONCENTRATION OF STOCK (ug/ml)	ALIQOT	STOCK SOURCE	FINAL VOLUME (ml)	DATE/INITIAL
<u>OCL CALIBRATION CURVE</u>						
LEV. 1A	0.0025	10ug/ml	2.5ul	OCL STOCK	10ml	YV
LEV. 1	0.0050		5ul	PREP'D: 2-13-04	HEXANE	8-2-04
LEV. 2	0.0055		55ul	EXP: 2-13-05	LOT#	SOLN'
LEV. 3	0.1000		100ul		44019	EXP.
LEV. 6	0.2500		250ul			2-2-04

<u>OCL DEGRADATION CHECK</u>						
ENDRIN P,P'-DDT	0.50ug/ml	100ug/ml	1000ul	PROTOCOL	200ml	YV
				XAPPL-DEG-100	HEXANE	8-2-04
				LOT# R1030312001	44019	SOLN'
				-9540		EXP:
				REC: 3-20-03		8-2-05
				OPEN: 8-2-04		
				EXP: 8-2-05		

<u>PCB SOIL SPIKE</u>						
AR1016 AR1260	50ug/ml	1000ug/ml	2500ul		50ml	YV 8/3/04
				LOT# A028554-11880	ACETONE	SOLN'
				REC: 1/12/04	CK511	EXP:
				OPEN: 8-3-04		11/3/04
				EXP: 8-3-05		
				Lot# A028554 Exp: 2/08 Store: Refrigerate		

<u>OCL SOIL SURROGATE</u>						
TCMX DBC DECA	2ug/ml	1000ug/ml	1000ul	O2SI	50ml	YV 8/1/04
				Pesticide Surrogate Solution, 1.000 mg/L, 1 ml	ACETONE	SOLN'
				Cat. No: 130070-01	CK511	EXP:
				Lot No: 107660		11/3/04
				Exp: 12/11/03 APPL exp 9/3/05		
				Not for Human Consumption		

PREPARED SPK/SURR/STD
LOG BOOK # 19

PREPARED SPK/SURR/STD
LOG BOOK # 19

119

COMPOUND	CONCENTRATION IN MIX (ug/ml)	CONCENTRATION OF STOCK (ug/ml)	ALIQOT	STOCK SOURCE	FINAL VOLUME (ml)	DATE/INITIAL
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Motor Oil Spike

Motor Oil	5000 ug/ml	50,000 ug/ml	1.0 ml	Restek Cat# 31464 Lot# A027414-11548 rec: 12/1/02 open: 2/13/04 exp: 2/13/05	10 ml MeCl ₂ Lot# C1275	2/13/04 6 exp 5/13/04
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OCL STOCK Solution

10 ug/ml	100 ug/ml	1000 ug/ml	0.25%	10 ml Hexane (43309)	CA 2/13/04
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02si Organochlorine Pesticide Solution 20 + Surrogate, 100 mg/L, 1ml
 Cat. No: 130049-01 Exp: 10/25/2006
 Lot No: 106965-11231 Storage: Refrigerated
 Solvent: Tol:Hex 1:1
 Not for Human Consumption For Research Use Only
 Made in USA Date Opened: 2/13/04
 Exp: 2/13/05
 Solvent Exp: 2/13/05

See compounds
in Water
Spike on 1/9

OCL Calibration Curve

Level 1A	0.0025	10 ug/ml	2.5 ul	OCL Stock	10 ml	CA 2/13/04
1	0.0050		5 ul	Cat #: 130049-01	43309	
2	0.0055		55 ul	lot #: 106965		
3	0.1000		100 ul	Prep: 2/13/04		
4	0.1500		1500 ul	Exp: 2/13/05	100 mL Hexane 43309	
5	0.2000		200 ul	Solvent's Exp: 8/13/04	10 mL Hexane	
6	0.2500		250 ul			

OPA SECOND SOURCE STANDARD

ULTRA SCIENTIFIC 250 Smith St., North Kingstown, RI 02852
 401-294-9400
 Custom Standard OPEN: 2-13-04
 CUS-5348 EXP: 9-13-04
 17 Analytes in methanol REC: 2-13-04 1 mL
 Lot No. CA-0296-12234 Exp. Date 09/2004

LAB USE ONLY

YV
2-13-04

PREPARED SPK/SURR/STD
LOG BOOK # 20

87

COMPOUND	CONCENTRATION IN MIX (ug/ml)	CONCENTRATION OF STOCK (ug/ml)	ALIQOT	STOCK SOURCE	FINAL VOLUME (ml)	DATE/INITIA
<u>OCL 2nd Source</u>						
*Various see pg 45	0.150	1.0	1500 μ l	OCL 2nd source stock prep: 2/6/04 ex: 10/21/04 sol'n ex: 10/21/04	10ml Hexane lot#: 43351	ll 6/8/04
<u>OCL 1-5 Calibration Standard</u>						
*Various see pg 43	Level 5 0.200	10	200 μ l	OCL stock solution prep: 2/13/04 ex: 2/13/05 sol'n ex: 12/8/04	10ml Hexane lot#: 43351	ll 6/8/04
<u>Diesel 2nd Source Std.</u>						
Diesel	4,100	50,000	80 μ l	O2Si Cat# 010438-S6 Lot# 106222-12291 Rec: 2/20/04 upd: 6/8/04 Exp: 6/8/05	10ml MeCl ₂ Lot# CK 296.	R.P. 6/8/04 Sol Exp. 12/8/04
<u>1,3 DBP STOCK</u>						
1,3 DBP	100 μ g/ml	1000 μ g/ml	1000 μ l	ABSOLUTE STD. OPENED: 6/9/04 EX: 6/9/05	10ml #CE276 MeOH	JT 6/9/04 Soln exp: 6/9/05
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <p>Part #: 71326 Laboratory Use Only-See MSDS Lot #: 122903 Exp: 122908 1 mL 1,3-Dibromopropane 1,3-Dibromopropane Lot #: 122903-11871 1000 ug/mL in m Rec: 1/12/04 APPL exp ABSOLUTE STANDARDS, INC. • (DUU) 300-1131</p> </div>						

11b

PREPARED SPI/SURR/STD
LOG BOOK # 20

	CONCENTRATION OF STOCK (ug/ml)	ALIQUOT	STOCK SOURCE	FINAL VOLUME (ml)	DATE/INITIALS
<u>Pyrethroids II stock</u>					
Bifenthrin	100	1000 μ l	UltraSci 5623	10ml	7/2/04
Cyfluthrin	100		Lot# CA-0961-13378	Hex	
Cypermethrin	500		Rec. 6/17/04	Lot# 17505	
Esfenvalerate	100		Op'd 7/2/04		
Fenvalerate	100		Exp. 7/2/05		
L-Cyhalothrin	100		Absolute 93679		
Permethrin	100		Lot# 060804-13350		
			Rec. 6/15/04	Exp 7/2/05	

	CONCENTRATION OF STOCK (ug/ml)	ALIQUOT	STOCK SOURCE	FINAL VOLUME (ml)	DATE/INITIALS
<u>Pyrethroids II Curve</u>					
Level-1	0.005/0.025	5 μ l		10ml	
Level-2	0.025/0.125	25 μ l		10ml	
Level-3	0.05/0.250	50 μ l		Hex	
Level-4	0.100/0.500	100 μ l		Lot# 17505	
Level-5	0.150/0.750	150 μ l			
Level-6	0.200/1.00	200 μ l			
Level-7	0.250/1.25	250 μ l			

	CONCENTRATION OF STOCK (ug/ml)	ALIQUOT	STOCK SOURCE	FINAL VOLUME (ml)	DATE/INITIALS
<u>Pyrethroids 2nd Source Stock</u>					
See above	100	1000 μ l	UltraSci cus 5623	10ml	7/2/04
	500		Lot# CA-0961-13378	Hex	
	100		Rec. 6/17/04	Lot# 17505	
			Op'd 9/2/04		
			Exp 7/2/05		
			sol'n ex: 7/2/05		

	CONCENTRATION OF STOCK (ug/ml)	ALIQUOT	STOCK SOURCE	FINAL VOLUME (ml)	DATE/INITIALS
<u>Pyrethroids 2nd Source</u>					
See above	0.150	150 μ l		10ml	
	0.150	10		10ml	
	0.250	50		Hex	
	0.50	10		Lot# 17505	
	0.150	10			
	0.150	10			
	0.150	10			

PREPARED OF BURR/STD
LOG BOOK # 21

3

COMPOUND	CONCENTRATION IN MIX (ug/ml)	CONCENTRATION OF STOCK (ug/ml)	ALIQUOT	STOCK SOURCE	FINAL VOLUME (ml)	DATE/INIT
<u>Pyrethroids II Spike</u>						
Bifenthrin	1.0	10	1000 ul	Pyrethroids II stock	10ml	LM
Cyfluthrin	1.0	10		prep: 7/2/04 ex: 7/2/05	acetone	7/13/04
Cypermethrin	5.0	50		sol'n ex: 10/13/04	ck 511	
Esfenvalerate	1.0	10				
Fenvalerate	1.0	10				
L-Cyhalothrin	1.0	10				
Permethrin	1.0	10				

170W
1P:
04

HERB SPIKE

FLUORFEN	1.6	80	4V	4000 ml
ANTAZON	3.2	160	2000 ml	
CHLORAMBEN	3.2	160		
2,4-D	3.2	160		
HALAPON	6.4	320		
DB DCPA DIACID	6.4	320		
MBA	0.64	32		
DICHLOROBENZOIC ACID	0.64	32		
CHLORPROP	3.2	160		
OSEB	1.6	80		
DICHLOROPHENYLACTIC ACID	3.2	160		
ETH-4,6 DINITROPHENOL	1.28	64		
PA ACID	640	32,000		
P ACID	640	32,000		
ITROPHENOL	1.6	80		
ITACHLOROPHENOL	0.64	32		
LORAM	0.64	32		
VEX	0.64	32		
ST	0.64	32		

Exp: Feb 26, 2005

CARCINOGENIC

S-8254A-R1
Custom Herbicide Standard
Varied conc. in Hexane: T
Lot: B3020130
Exp: Feb 26, 2005
CARCINOGENIC
20 comps. 7/13/04

AccuStandard
Custom Herbicide Standard
Lot # B3020130 - 13657
Rec: 7/13/04 APPL exp: 1/26/05

S-8254A-R1
Custom Herbicide Standard
Varied conc. in Hexane: T
Lot: B3020130
Exp: Feb 26, 2005
CARCINOGENIC
20 comps. 7/13/04

AccuStandard
Custom Herbicide Standard
Lot # B3020130 - 13658
Rec: 7/13/04 APPL exp: 1/26/05

S-8254A-R1
Custom Herbicide Standard
Varied conc. in Hexane: T
Lot: B3020130
Exp: Feb 26, 2005
CARCINOGENIC
20 comps. 7/13/04

AccuStandard
Custom Herbicide Standard
Lot # B3020130 - 13659
Rec: 7/13/04 APPL exp: 1/26/05

S-8254A-R1
Custom Herbicide Standard
Varied conc. in Hexane: T
Lot: B3020130
Exp: Feb 26, 2005
CARCINOGENIC
20 comps. 7/13/04

100ml
ACETONE
CK 511

4V
7/13/04
SOLN
EXP:
10/13/04

2-04
W
XP:
1-04

NOT USED w/ 2/2/04

96

PREPARED SPIK/SURR/STD
LOG BOOK # 20

COMPOUND	CONCENTRATION IN MIX (ug/ml)	CONCENTRATION OF STOCK (ug/ml)	ALIUQUOT	STOCK SOURCE	FINAL VOLUME (ml)	DATE/INITIAL
<u>Esfenvalerate single pt.</u>						
Esfenvalerate	0.5 µg/ml	0.1 mg/ml	50 µl	Crescent Chemical W., Inc. 7508M lot: 08H-001A-1334 Rec. 12/11/98 Exp. 3/0/00 * used only for single point analysis	10 ml MeOH lot# 176CD	6/14/04
<u>TPH Surr.</u>						
α-Terphenyl	50	5,000	500 µl	02Si Cat# 110316-02 Lot# 107000 App# 11303 Rec: 10/31/03 Dpt: 6/14/04 Exp: 6/14/05 02SI Exp: 11/1/06	50 ml MeCL ₂ Lot# CKR96	R.P. 6-14-04
Jctacosane						Sol Exp 9-14-04
<u>OCL Water Surr</u>						
TCHX DECA DPC	1.5	1,000	375 µl	02Si lot# 130070-01 lot# 107660-11616 Rec. 12/1/03 Dpt 5/14/04 Exp. 5/14/05 Dm Exp. 9/14/04	250 ml Acetone lot# CK511	6/14/04

NOT USED W 6/14/04

Injection Log

Directory: G:\LUCY\DATA\040804\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	3	0804003.D	1	OCL-1A 8/2/04	WATER	8-4-04 16:29:32
2	4	0804004.D	1	OCL-1 8/2/04	WATER	8-4-04 16:44:11
3	5	0804005.D	1	OCL-2 8/2/04	WATER	8-4-04 16:58:51
4	6	0804006.D	1	OCL-3 8/2/04	WATER	8-4-04 17:13:29
5	7	0804007.D	1	OCL-4 6/3/04	WATER	8-4-04 17:28:04
6	8	0804008.D	1	OCL-5 8/2/04	WATER	8-4-04 17:42:39
7	9	0804009.D	1	OCL-6 8/2/04	WATER	8-4-04 17:57:13
8	44	0804044.D	1	OCL-4 6/3/04	WATER	8-5-04 13:23:34
9	50	0804050.D	1	PYRTH2-1 7/2/04	WATER	8-5-04 14:51:57
10	51	0804051.D	1	PYRTH2-2 7/2/04	WATER	8-5-04 15:06:39
11	52	0804052.D	1	PYRTH2-3 7/2/04	WATER	8-5-04 15:21:27
12	53	0804053.D	1	PYRTH2-4 7/2/04	WATER	8-5-04 15:36:07
13	54	0804054.D	1	PYRTH2-5 7/2/04	WATER	8-5-04 15:50:49
14	55	0804055.D	1	PYRTH2-6 7/2/04	WATER	8-5-04 16:05:29
15	56	0804056.D	1	PYRTH2-7 7/2/04	WATER	8-5-04 16:20:10
16	57	0804057.D	1	PYRTH2 2ND SRC 7/2/04	WATER	8-5-04 16:34:52
17	59	0804059.D	2	040804A BLK 2/1000	WATER	8-5-04 17:04:12
18	60	0804060.D	2	040804A LCS-1 2/1000	WATER	8-5-04 17:18:53
19	61	0804061.D	4	AP73373W02 MS 2/500	WATER	8-5-04 17:33:40
20	62	0804062.D	4	AP73373W02 MSD 2/500	WATER	8-5-04 17:48:19
	63	0804063.D	1.92308	AP73369W01 2/1040	WATER	8-5-04 18:02:59
22	64	0804064.D	1.90476	AP73370W01 2/1050	WATER	8-5-04 18:17:40
23	65	0804065.D	1.90476	AP73371W01 2/1050	WATER	8-5-04 18:32:20
24	66	0804066.D	1.90476	AP73372W01 2/1050	WATER	8-5-04 18:47:01
25	67	0804067.D	1.90476	AP73373W01 2/1050	WATER	8-5-04 19:01:40
26	68	0804068.D	1.90476	AP73374W01 2/1050	WATER	8-5-04 19:16:28
27	77	0804077.D	1	OCL-4 6/3/04	WATER	8-5-04 21:28:38
28	80	0804080.D	1	PRYTH2-5 7/2/04	WATER	8-5-04 22:12:35

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804068.D\ECD1A.CH Vial: 68
 Signal #2 : G:\LUCY\DATA\040804\0804068.D\ECD2B.CH
 Acq On : 8-5-04 19:16:28 Operator: SA
 Sample : AP73374W01 2/1050 Inst : Lucy
 Misc : WATER Multiplr: 1.90
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 6 8:53 2004 Quant Results File: PPTH.RES

Quant Method : G:\LUCY\DATA\040804\PPTH.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 16:39:19 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

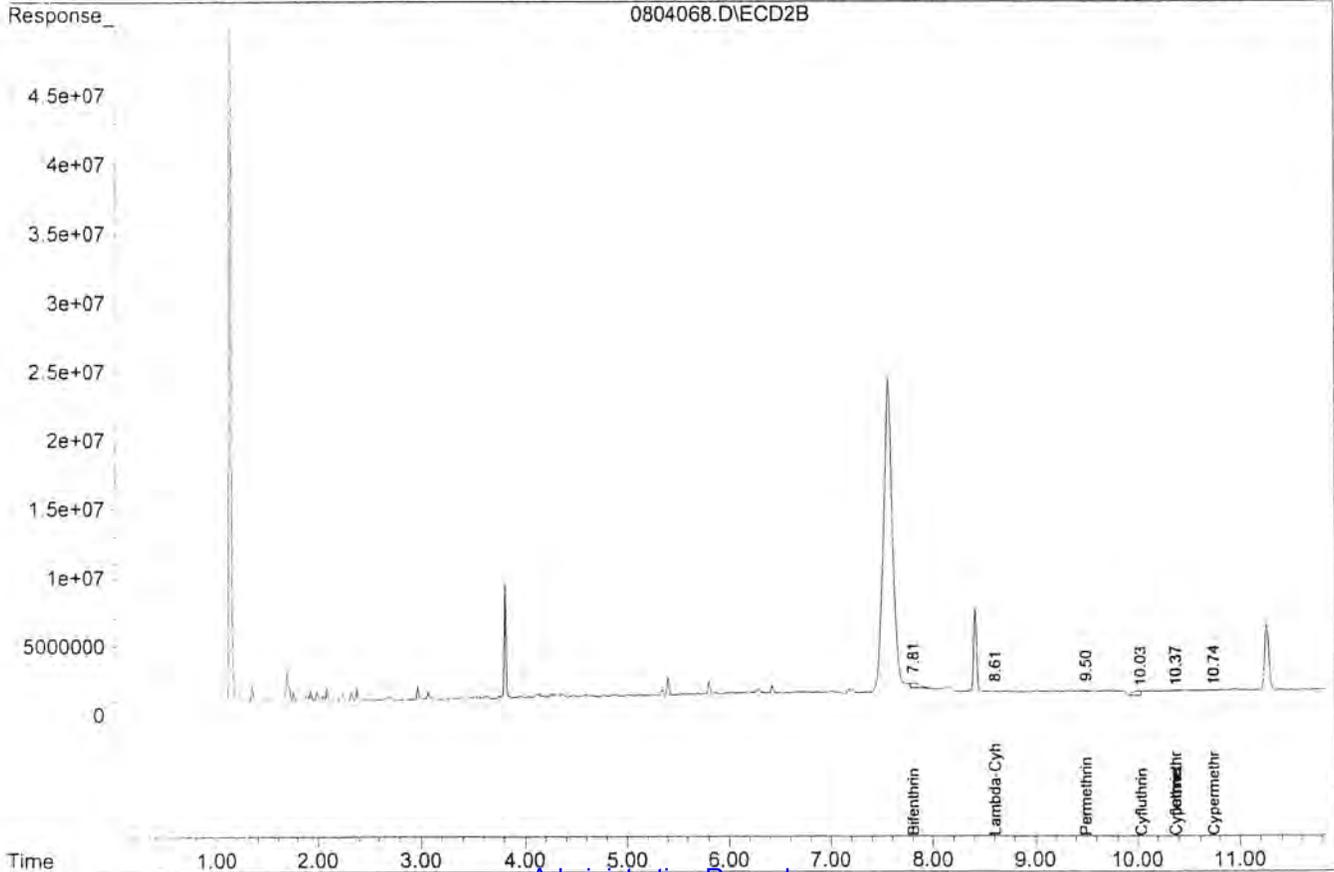
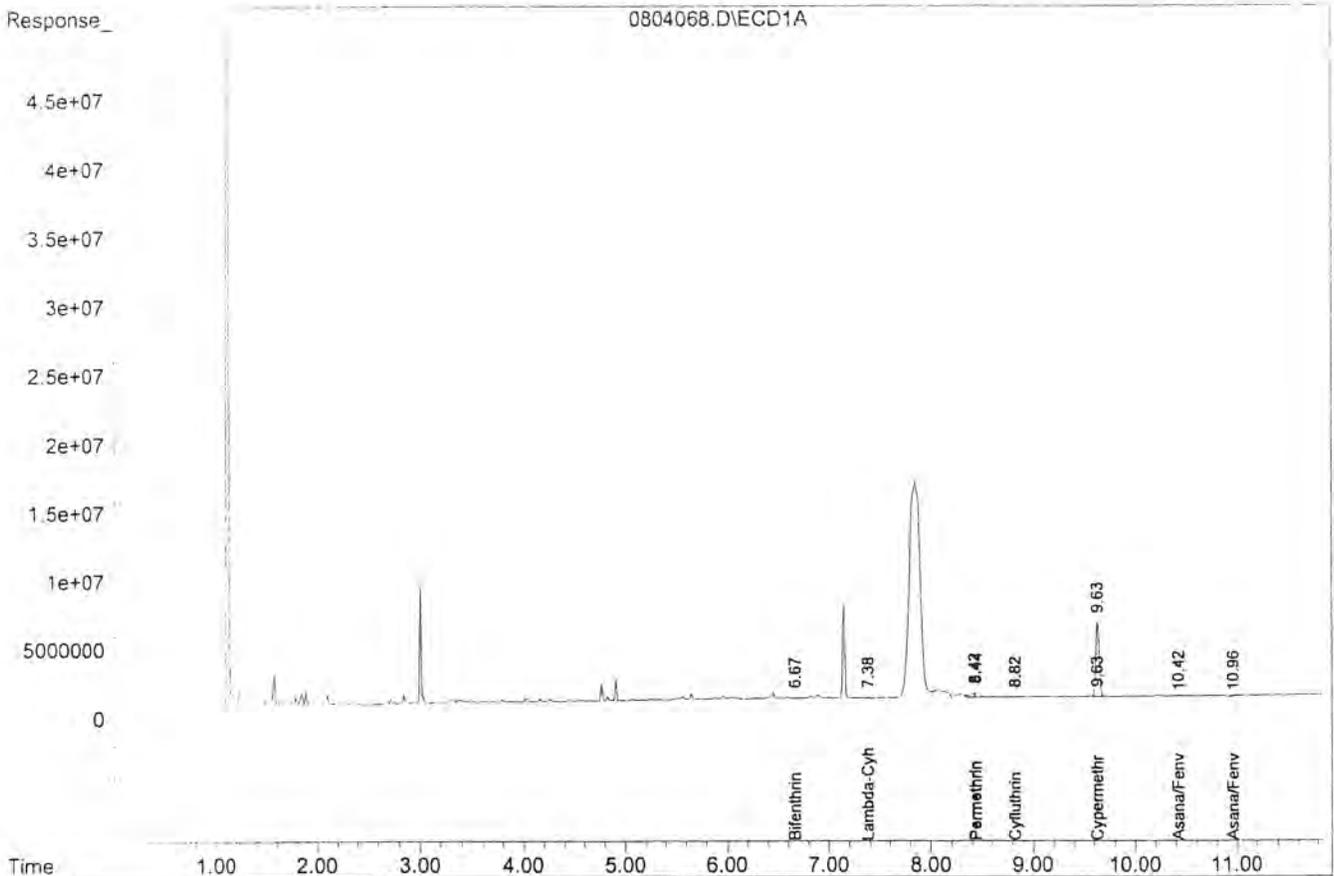
Compound	RT#1	RT#2	Resp#1	Resp#2	t#1	t#2
Target Compounds						
1) Bifenthrin	6.67	7.81	44874	378392	0.0031	0.0275 #
2) Lambda-Cyhalothr	7.38	8.61	59601	39567	0.0021	0.0015 #
3) Permethrin 1	8.42	9.50	277317	36537	0.0854	0.0120 #
4) Permethrin 2	8.44	9.50	279920	36537	0.1215	0.0176 #
5) Cyfluthrin 1	8.82	10.03	30349	317793	0.0062	0.0732 #
6) Cyfluthrin 2	8.82	10.37	30349	40664	0.0046	0.0068 #
7) Cyfluthrin 3	8.82	10.37	30349	40664	0.0037	0.0090 #
8) Cypermethrin 1	0.00	10.37	0	40664	N.D.	0.0097 #
9) Cypermethrin 2	9.63	10.74	5445203	28212	1.3181	0.0077 #
10) Cypermethrin 3	9.63	10.74	5445203	28212	1.0490	0.0078 #
11) Asana/Fenvalerat	10.42	0.00	29917	0	0.0025	N.D. #
Asana/Fenvalerat	10.96f	0.00	64809	0	0.0034	N.D. #

Target Compounds

MD

Data File : G:\LUCY\DATA\040804\0804068.D
Acq On : 8-5-04 19:16:28
Sample : AP73374W01 2/1050
Misc : WATER
Quant Method : G:\LUCY\DATA\040804\PRTH.M

Vial: 68
Operator: SA
Inst : Lucy
Multiplr: 1.90



**EPA METHOD 8081A
Organochlorine Pesticides
Calibration Data**

APPL, INC.

Organochlorine Pesticides Analysis by
EPA Method 608/8081

Form 6 GC
Initial Calibration

Lab Name: APPL, Inc.

Case No:

Matrix: Water

SDG No: 45039

Initial Cal. Date: 8/4/04

Instrument: Lucy

Initials: SA

0804005.D 0804006.D 0804007.D 0804008.D 0804009.D 0804004.D 0804003.D

Compound	2	3	4	5	6	1	1A	Avg	%RSD
1 S. TCMX	126007800	123253130	124432060	121470140	124475756	126666400	99072333	120768231	8.0 S
2 TM A-BHC	167750636	169568100	174765807	169967525	174833472	144411800	108557333	158550668	15 TM
3 TM B-BHC	61448891	58746850	58106180	57731490	58733180	63414000	51555000	58533656	6.3 TM
4 M G-BHC(LINDANE)	154503782	154045890	155940693	154087835	156606780	134267400	106077667	145075721	13 M
5 TM D-BHC	155798855	157893390	161166060	153838510	161152388	136584800	98858000	146470286	15 TM
6 M HEPTACHLOR	137807236	135309050	137156180	134446280	135789080	135780800	107291333	131939994	8.3 M
7 M ALDRIN	127936200	129352550	131634287	128432905	132068928	117523600	91447333	122627972	12 M
8 TM HEPTACHLOR EPOXIDE	122468436	120913650	121611760	118803300	121265824	121810200	97985000	117836881	7.5 TM
9 TM G-CHLORDANE	121860000	120260580	121429207	119594280	122789700	119230200	90823667	116569662	9.8 TM
10 TM A-ENDOSULFAN	106469255	105132140	103278453	102128470	102609112	104086000	82214000	100845347	8.3 TM
11 TM A-CHLORDANE	115128400	116867310	118049633	116987175	117526772	116846400	95188000	113799099	7.3 TM
12 TM P,P-DDE	122551327	124517080	128871633	126748380	128798988	108075000	86199667	117966011	13 TM
13 M DIELDRIN	124906055	126662280	124330213	125975410	126198884	117375600	89348333	119256662	11 M
14 M ENDRIN	98079891	100898850	101204933	99342925	100029168	94309600	73931000	953994481	10 M
15 TM B-ENDOSULFAN	99460091	94247080	96694000	94162475	95379444	123382000	104798333	101160489	10 TM
16 TM P,P-DDD	102616800	100515170	102735707	102004955	103344404	94858000	73783333	97122624	11 TM
17 TM ENDRIN ALDEHYDE	78424909	76752970	79458160	75507180	76823224	77789800	54365667	74160273	12 TM
18 M P,P-DDT	102174200	101623410	104267787	99803870	103554056	95352600	73954667	97247227	11 M
19 TM ENDOSULFAN SULFATE	87391927	86095710	86057053	82298775	84494424	86973600	64921000	82604641	9.7 TM
20 TM ENDRIN KETONE	99401800	98423600	95772940	95478410	94045596	100555400	70042333	93388583	11 TM
21 TM METHOXYCHLOR	48968145	46072070	45744580	45061925	45431644	50341000	40076667	45956576	7.1 TM
22 S DBC	77376800	75100930	77558413	76901330	78096368	80164200	62063667	75323101	8.0 S
23 S DECA	59701455	58722040	56402607	56715365	58475604	70444000	57588667	59721391	8.1 S
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Organochlorine Pesticides Analysis by
EPA Method 608/8081

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 45039
 Case No: _____ Initial Cal. Date: 8/4/04
 Matrix: Water Instrument: Lucy

Initials: SA

Signal #2

Compound	2	3	4	5	6	1	1A	Avg	%RSD
36 S TCMX #2	126894545	125725350	125761553	122463990	122157000	126211200	101369333	121511853	7.5 S
37 TM A-BHC #2	171176109	171726240	174479360	172900090	173087420	147526400	112960000	160550803	14 TM
38 TM B-BHC #2	62513455	59527680	59877473	59207655	59332512	65366600	50971333	59542387	7.4 TM
39 M G-BHC(LINDANE) #2	152241836	149793220	155992867	151650020	150155492	143455400	107933000	144460262	11 M
40 TM D-BHC #2	156305745	153946790	158893167	158986505	158011248	141700400	102344000	147169694	14 TM
41 M HEPTACHLOR #2	138832855	134670130	137832313	134369400	135826724	138677000	106146333	132336394	8.8 M
42 M ALDRIN #2	132403145	127926180	131166273	130601655	128456416	123947800	93106667	123944019	11 M
43 TM HEPTACHLOR EPOXIDE #2	124053036	120459680	122688533	121221455	117504508	129647600	99464000	119291259	8.0 TM
44 TM G-CHLORDANE #2	117859382	113350050	115251040	114514400	116151452	118818400	88349333	112042008	9.5 TM
45 TM A-ENDOSULFAN #2	100133927	97050100	99051513	98596610	97105392	100734600	77969667	95805973	8.3 TM
46 TM A-CHLORDANE #2	113577855	108411780	112656553	111733835	109844184	118540800	88270000	109005001	8.9 TM
47 TM P,P-DDE #2	117776455	115754670	118679940	117559695	118045928	107419000	79004000	110605670	13 TM
48 M DIELDRIN #2	113427291	110532950	113239407	113990250	114244128	111028000	81842000	108329147	11 M
49 M ENDRIN #2	95944709	89911380	90505173	89542545	90215540	181036400	261588333	128392012	53 ML 1.000
50 TM B-ENDOSULFAN #2	87932182	83558250	85883900	84543365	82940698	89625800	66643333	83018217	9.2 TM
51 TM P,P-DDD #2	93646727	92086560	93555987	91542180	93337440	93139000	75946667	90464937	7.1 TM
52 TM ENDRIN ALDEHYDE #2	72595709	69617650	71896293	69352370	69639220	74167800	49765000	68147720	12 TM
53 M P,P-DDT #2	90413000	89601980	91195520	91777115	90732208	86917600	63736000	86339060	12 M
54 TM ENDOSULFAN SULFATE #2	79087891	76631990	76114593	75066700	75242992	83551200	61328667	75289148	9.1 TM
55 TM ENDRIN KETONE #2	92507909	86943160	90008447	84877540	86185728	92068400	70561333	86164645	8.7 TM
56 TM METHOXYCHLOR #2	48005800	45900140	45543793	43516110	43545292	51215400	38959333	45240838	8.5 TM
57 S DBC #2	70448800	67602490	71397753	68748970	69794188	74031200	57828667	68550295	7.5 S
58 S DECA #2	54639491	50656240	50416193	49851105	48756884	64527600	51685333	52933264	10 S
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7.72

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804003.D\ECD1A.CH Vial: 3
 Signal #2 : G:\LUCY\DATA\040804\0804003.D\ECD2B.CH
 Acq On : 8-4-04 16:29:32 Operator: SA
 Sample : OCL-1A 8/2/04 Inst : Lucy
 Misc : WATER Multiplr: 1.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 13:11 2004 Quant Results File: OCL.RES

Quant Method : G:\LUCY\DATA\040804\OCL.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 11:03:57 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2
System Monitoring Compounds						
1) S TCMX	3.00	3.80	297217	304108	0.0025	0.0025
Surrogate Spike	0.150	Range 25 - 150	Recovery =		1.67%#	1.67%#
2) S DBC	7.15	8.41	186191	173486	0.0025	0.0025
Surrogate Spike	0.150		Recovery =		1.67%	1.67%
23) S DECA	9.63	11.26	172766	155056	0.0029	0.0029
Surrogate Spike	0.150	Range 25 - 150	Recovery =		1.93%#	1.93%#
Target Compounds						
2) TM A-BHC	3.60	4.23	325672	338880	0.0021	0.0021
3) TM B-BHC	4.21	4.84	154665	152914	0.0026	0.0026
4) M G-BHC (LINDANE)	3.98	4.57	318233	323799	0.0022	0.0022
5) TM D-BHC	4.50	5.11	296574	307032	0.0020	0.0021
6) M HEPTACHLOR	4.34	5.20	321874	318439	0.0024	0.0024
7) M ALDRIN	4.66	5.54	274342	279320	0.0022	0.0023
8) TM HEPTACHLOR EPOXI	5.21	5.98	293955	298392	0.0025	0.0025
9) TM G-CHLORDANE	5.44	6.31	272471	265048	0.0023	0.0024
10) TM A-ENDOSULFAN	5.59	6.41	246642	233909	0.0024	0.0024
11) TM A-CHLORDANE	5.53	6.36	285564	264810	0.0025	0.0024
12) TM P,P-DDE	5.72	6.51	258599	237012	0.0022	0.0021
13) M DIELDRIN	5.88	6.70	268045	245526	0.0022	0.0023
14) M ENDRIN	6.20	6.99	221793	784765	0.0023	0.0041 #
15) TM B-ENDOSULFAN	6.48	7.31	314395	199930	0.0031	0.0024
16) TM P,P-DDD	6.30	7.12	221350	227840	0.0023	0.0025
17) TM ENDRIN ALDEHYDE	6.73	7.45	163097	149295	0.0022	0.0022
18) M P,P-DDT	6.61	7.52	221864	191208	0.0023	0.0022
19) TM ENDOSULFAN SULFA	6.97	7.84	194763	183986	0.0024	0.0024
20) TM ENDRIN KETONE	7.78	8.49	210127	211684	0.0023	0.0025
21) TM METHOXYCHLOR	7.45	8.15	120230	116878	0.0026	0.0026

Target Compounds

Quantitation Report (Not Reviewed)

Signal #1 : G:\LUCY\DATA\040804\0804004.D\ECD1A.CH Vial: 4
 Signal #2 : G:\LUCY\DATA\040804\0804004.D\ECD2B.CH
 Acq On : 8-4-04 16:44:11 Operator: SA
 Sample : OCL-1 8/2/04 Inst : Lucy
 Misc : WATER Multiplr: 1.00
 IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
 Quant Time: Aug 5 13:11 2004 Quant Results File: OCL.RES

Quant Method : G:\LUCY\DATA\040804\OCL.M (RTE Integrator)
 Title : 508/608/8081
 Last Update : Thu Aug 05 11:03:57 2004
 Response via : Multiple Level Calibration
 DataAcq Meth : EPA8081.M

Volume Inj. : 1ul
 Signal #1 Phase : DB-35ms Signal #2 Phase: DB-XLB
 Signal #1 Info : 0.32 Signal #2 Info : 0.32

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2
System Monitoring Compounds						
1) S TCMX	3.00	3.81	633332	631056	0.0052	0.0052
Surrogate Spike	0.150	Range 25 -	150	Recovery =	3.47%#	3.47%#
22) S DBC	7.15	8.41	400821	370156	0.0053	0.0054
Surrogate Spike	0.150			Recovery =	3.53%	3.60%
23) S DECA	9.63	11.26	352220	322638	0.0059	0.0061
Surrogate Spike	0.150	Range 25 -	150	Recovery =	3.93%#	4.07%#
Target Compounds						
2) TM A-BHC	3.60	4.23	722059	737632	0.0046	0.0046
3) TM B-BHC	4.21	4.84	317070	326833	0.0054	0.0055
4) M G-BHC (LINDANE)	3.98	4.57	671337	717277	0.0046	0.0050
TM D-BHC	4.51	5.12	682924	708502	0.0047	0.0048
6) M HEPTACHLOR	4.35	5.20	678904	693385	0.0051	0.0052
7) M ALDRIN	4.67	5.54	587618	619739	0.0048	0.0050
8) TM HEPTACHLOR EPOXI	5.21	5.98	609051	648238	0.0052	0.0054
9) TM G-CHLORDANE	5.44	6.31	596151	594092	0.0051	0.0053
10) TM A-ENDOSULFAN	5.60	6.41	520430	503673	0.0052	0.0053
11) TM A-CHLORDANE	5.54	6.37	584232	592704	0.0051	0.0054
12) TM P,P-DDE	5.72	6.51	540375	537095	0.0046	0.0049
13) M DIELDRIN	5.88	6.71	586878	555140	0.0049	0.0051
14) M ENDRIN	6.20	6.99	471548	905182	0.0049	0.0055
15) TM B-ENDOSULFAN	6.48	7.31	616910	448129	0.0061	0.0054
16) TM P,P-DDD	6.30	7.12	474290	465695	0.0049	0.0051
17) TM ENDRIN ALDEHYDE	6.73	7.45	388949	370839	0.0052	0.0054
18) M P,P-DDT	6.61	7.53	476763	434588	0.0049	0.0050
19) TM ENDOSULFAN SULFA	6.97	7.84	434868	417756	0.0053	0.0055
20) TM ENDRIN KETONE	7.78	8.50	502777	460342	0.0054	0.0053
21) TM METHOXYCHLOR	7.45	8.15	251705	256077	0.0055	0.0057

Target Compounds

Data File : G:\LUCY\DATA\040804\0804003.D
 Acq On : 8-4-04 16:29:32
 Sample : OCL-1A 8/2/04
 Misc : WATER
 Quant Method : G:\LUCY\DATA\040804\OCL.M

Vial: 3
 Operator: SA
 Inst : Lucy
 Multiplr: 1.00

