CONTAMINANT MONITORING AND RESEARCH PROGRAM

Final Project Report

Investigations of Sources and Effects of Pyrethroid Pesticides in Watersheds of the San Francisco Estuary

CONTRIBUTION NO. 523

JANUARY 2007

PRISM GRANT: 041355520

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Aknowedgements:
The authors would like to thank the SFEI data management team for data format and QA review of the field sampling data: Cristina Grosso, John Ross, Amy Franz, Predrag Stevanovic, and Donald Yee. Thomas Mumley (SFBRWQB) and Bruce Thompson (SFEI) reviewed and commented on the draft report. Linda Wanczyk designed the cover. Richrad Condit was the initial SWRCB grant manager for this grant.

This report should be cited as:
Lowe S., B. Anderson, and B. Phillips. 2007. Final Project Report: Investigations of Sources and Effects of Pyrethroid Pesticides in Watersheds of the San Francisco Bay Estuary. Proposition 13 PRISM Grant # 041355520. SFEI Contribution #523. San Francisco Estuary Institute, Oakland, CA

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INTRODUCTION

Sarah Lowe, SFEI

The primary purpose of this Proposition 13, PRISM Grant project was to investigate pyrethroids in sediments and their potential impact on benthic organisms. In recent years the US EPA has restricted the use of organophosphate (OP) pesticides for home use. As a consequence, the use of alternative pesticides such as pyrethroids is increasing in Bay Area watersheds. Pyrethroids are highly insoluble and are primarily associated with sediments in aquatic systems. Research has shown that greater than 90% of pyrethroid mass entering aquatic systems is associated with particles (e.g. suspended sediments) within 1 hour of application. Sediment-associated invertebrates such as amphipods are the most sensitive benthic organisms to these insecticides.

This project was developed to accomplish three separate tasks to

- screen a subset of tributaries that drain into the San Francisco Estuary for potential for sediment toxicity and evaluate pyrethroid concentrations in those tributaries,
- develop LC50s for a few pyrethroids for estuarine amphipods used in sediment toxicity testing in the region, and
- develop Toxicity Identification Evaluations (TIEs) for sediments toxicity tests that would sort out toxicity caused by pyrethroid compounds from other possible causes.

These tasks are linked by the common goal to increase our understanding sediment contamination and how it might affect estuarine amphipods of the San Francisco Estuary. By studying the current condition of sediment contamination in Estuary tributaries, filling in information gaps on the sensitivity of estuarine amphipods to specific compounds of local concern, and developing laboratory methods to determine the possible agents responsible for causing the observed sediment toxicity, this study provides needed information to begin to address what might be causing the persistent sediment toxicity to amphipods observed in the Regional Monitoring Program for Water Quality (RMP) since the programs inception in 1993, and of concern to environmental managers.

In-kind funding from the San Francisco Estuary Institute's Regional Monitoring Program for Water Quality (RMP) made it possible to broaden the scope of the PRISM Grant tributary screening study, from a focused characterization of sediment toxicity and pyrethroid pesticides, to include additional toxic pollutants listed in the California Toxics Rule (including metals, petroleum hydrocarbons, chlorinated and brominated hydrocarbons and pesticides) and more recent pollutants of concern (the flame retardants polybrominated diphenyl ethers (PBDEs)). This report also includes results from the RMP Exposure and Effects Pilot Study, which developed LC50s for the same estuarine amphipods reported in this study for three pyrethroid pesticides, to include three additional compounds of concern in the Estuary (copper, fluoranthene, and chlorpyrifos).

This report is separated into three chapters that present the reporting deliverables for the three project tasks mentioned above. Each chapter includes the associated references, tables, and figures at the end of each chapter.

Appendices A, B, and C present supporting documentation related to the ambient sediment sampling study, project task 3.10 (Chapter 1), and include sampling event photos, a summary of the quality assurance review, and a table of sampling results. Appendix D contains the agenda and meeting notes from two TIE workshops convened under this grant as part of the TIE development study, task 3.30 (Chapter 3).

Chapter 1. Ambient Sediment Sampling, Chemical analyses, and Toxicity Assays. This chapter reports on work performed under task 3.10 of this PRISM Grant.

A field study of six tributaries that drain into the San Francisco Estuary was conducted during the wet season of 2004-2005 (November and April) to determine if sediments entering the Estuary were toxic to ecologically relevant benthic amphipods. This study characterized contaminant levels in sediments, and the potential for toxicity. Sediments at one South Bay tributary (San Mateo Creek) were significantly toxic, warranting a Toxicity Identification Evaluation (TIE) to evaluate the possible causes of the observed toxicity.

In-kind funding for this study was provided by the RMP – Episodic Toxicity Program (2005), which provided enough funding to support two sampling events and the ability to analyze a larger suite of toxic pollutants (not part of the scope of this PRISM Grant). Results from the combined study are presented in this report.

Chapter 2. Relative Sensitivities of Toxicity Test Protocols With the Amphipods *Eohaustorius estuarius* and *Ampelisca abdita* to Sediment Spiked With Copper, Chlorpyrifos, Fluoranthene, Bifenthrin, Cypermethrin, and Permethrin. This chapter reports on work performed under task 3.20 of this PRISM Grant.

This study developed dose-response information (LC50s) for three pyrethroids (cypermethrin, permethrin, and bifenthrin) using standard EPA sediment toxicity test species: the amphipods *Eohaustorius estuarius* (an estuarine species used by the RMP's long term monitoring program) and *Ampelisca abdita* (an infaunal species found in the Estuary).

The RMP – Exposure and Effects Pilot Study (2004) conducted a separate study to develop LC50s for these same estuarine test species for copper, fluoranthene, and chlorpyrifos. Those results are presented in this report.

Chapter 3. Development of Toxicity Identification Evaluation (TIE) Methods for Pyrethroid Pesticides. This chapter reports on work performed under task 3.30 of this PRISM Grant.

Developed Toxicity Identification and Evaluation (TIE) procedures for sediment toxicity tests targeting pyrethroid pesticides.

CHAPTER 1. AMBIENT SEDIMENT SAMPLING, CHEMICAL ANALYSES & TOXICITY ASSAYS

Sarah Lowe, SFEI

The field monitoring study reported in this chapter covers work performed under Task 3.10: *Ambient Sediment Sampling, Analyses, and Toxicity Assays under this PRISM Grant # 041355520 AND additional work performed by the Regional Monitoring Program for Water Quality in the San Francisco Estuary (RMP) Episodic Toxicity Monitoring Program (2004-05). This work constitutes a jointly funded study to investigate sediment contamination, and the potential for sediment toxicity, during two sampling events (November 2004 and April 2005), in the lower freshwater and intertidal reaches of six tributaries around the San Francisco Estuary.*

1.1 INTRODUCTION

This project was designed to begin to address two current environmental concerns affecting the San Francisco Estuary. One is to investigate the possible causes of persistent sediment toxicity observed in the Estuary by the RMP Status and Trends program since it's inception in 1993 (SFEI 2003), and the other is concern over the fate and potential effects of pyrethroid pesticides on the environment as their use increases in watersheds around the Estuary (SFEI 2003; Amweg, Weston, and You. 2006).

Regulations restricting the use of the organophosphate pesticides diazinon and chlorpyrifos by the US Environmental Protection Agency in 1998 resulted in the decline in sales of those products in California during the period of 1999-2003. Several water toxicity studies in tributaries around the San Francisco Estuary documented a decline in the frequency of toxicity to water column species, and this is thought to be related to a decline in organophosphate pesticide use (SFEI 2003, Ruby, 2005). During this same period, the sales of pyrethroid pesticides have increased. Because of their tendency to accumulate in sediments, there is growing concern over the potential for sediment toxicity in sediments of the Estuary due to pyrethroid pesticides.

The RMP's-Status and Trends Monitoring Program has demonstrated seasonal differences in the frequency of sediment toxicity observed in the Estuary. Between 1993 and 1999 52% of the sediment toxicity samples collected during the winter sampling period (February) were toxic to amphipods while 15% of the samples collected during the summer sampling period (August) were toxic (Figure 1.1).

The RMP- Exposure and Effects Pilot Study (EEPS) toxicity workgroup met periodically between 2002 and 2003 to discuss the findings from the RMP's toxicity programs including the Episodic Toxicity Monitoring Program, which had been monitoring regional tributaries for aquatic toxicity during stormwater runoff events. The workgroup considered evidence of reduced occurrences of aquatic toxicity in the region and the shift in pesticide use patterns, and recommended that this program be adapted to investigate sediment toxicity in Estuary tributaries in 2004. Concurrent with this recommendation, SFEI was awarded the current PRISM grant to study several issues related to pyrethroids in sediments of the system. Resources from the PRISM and Episodic Toxicity Monitoring Program were combined for this field study designed to measure pyrethroid concentrations and associated sediment toxicity in six Estuary tributaries.

The focus of this study task was to evaluate if sediments from six tributaries around the Estuary were toxicity to freshwater and estuarine amphipods, and to characterize pyrethroid concentrations in those sediments. Recently deposited bedded surface sediments were collected for toxicity and chemical analyses.

Toxicity tests and chemical analyses were conducted on collected and homogenized sediment. Besides pyrethroid analyses, a suite of toxic pollutants listed in the California Toxics Rule (including metals, petroleum hydrocarbons, chlorinated and brominated hydrocarbons and pesticides) were characterized along with sediment grain-size, total organic carbon, and more recent pollutants of concern (including polybrominated diphenyl ethers (PBDEs)). While this PRISM grant focused on toxicity and pyrethroids, the RMP provided additional funding to enable a more complete characterization of contamination in tributary sediments.

Collaborating Laboratories

Laboratories that participate in the RMP Status and Trends Monitoring Program participated in this study to ensure consistency in sampling and analytical methods with the long-term data from the Estuary collected by the RMP (Table 1.1). One exception was for the sediment trace organics analyses in sediments, which was conducted by the California Department of Fish and Game's Water Pollution Control Laboratory (CDFG-WPCL) analyzed. This laboratory has worked closely with the UC-Davis toxicologists at the Marine Pollution Studies Laboratory at Granite Canyon (UCD-MPSL) on TIE development and dose-response studies prior to this study and was contracted to continue working with UCD-MPSL on tasks 2 and 3 of this Grant. Because of this CDFG-WPSL was contracted to perform the sediment trace organic analyses for the ambient sediment study in the tributaries.

1.2 METHODS

Two stations were selected in each of six San Francisco Estuary tributaries characterized by different mixes of urban and agricultural land-use practices (Figure 1.2). In general, tributaries in the North Bay drain mixed urban, rural, and some agricultural land-use types. Tributaries in the South Bay, while largely rural and agricultural in the upper watersheds, they pass through highly urbanized regions with varying degrees of industry, in their lower reaches, before reaching the San Francisco Estuary. An effort was made to locate stations that had been previously sampled as part of other studies and that contained depositional areas comprised of fine-grained sediments. The three North Bay tributaries selected were Petaluma River, Napa River, and Suisun Creek. The three South Bay tributaries were San Mateo Creek, Coyote Creek, and San Lorenzo Creek. Appendix A presents photos from each station during each sampling event. Most of these tributaries have one or more reservoirs in their upper watersheds.

The State Surface Water Ambient Monitoring Program – Region 2 has monitored three of the six selected tributaries (Petaluma, Suisun, and San Mateo), and described their watershed characteristics in detail in their workplans (SWAMP, 2001; SWAMP 2002). The RMP monitored Coyote Creek at two stations as a Pilot Study between 1996 and 1999 (Leatherbarrow et al., 2002). The Napa River was monitored by the RMP – Episodic Toxicity Monitoring Program (SFEI, 2003). Brief watershed land use descriptions follow starting with the Petaluma River watershed in the North Bay and moving clockwise around the Bay (Figure 1.2):

The Petaluma River watershed encompasses 97 square miles and contains rural, agricultural and limited residential and commercial land use. The lower watershed contains about 11% open space including marshes. Agricultural practices predominately poultry production, dairies, livestock, sheep, and horse farms (on large ranchettes dispersed throughout the watershed; SWAMP, 2002).

Napa River watershed encompasses 426 square miles and contains rural, agricultural and limited urban areas include residential and commercial land use. Vineyards and orchards are the dominant agricultural practices in this watershed. The lower reaches include grasslands, and marshes (NCRCD website).

Suisun Creek watershed encompasses 57 square miles and is largely agricultural and limited residential and commercial land use. Orchards are agricultural practices in this watershed. The lower reaches include grasslands, and marshes.

San Lorenzo Creek is in Alameda and Contra Costa Counties. The Lower watershed is surrounded by residential and industrial land use as the creek passes through the cities of Castro Valley and San Lorenzo. Urban runoff from storm drains is the major source of summer flow. The creek is highly channelized in the lower, urban reaches that drain into the Estuary.

The Coyote Creek watershed has historically been dominated by agricultural land use and still contains the largest contiguous area of agricultural land in the South Bay, Santa Clara Basin (Leatherbarrow et al. 2002; SCBWMI 2000). Urbanized land use in the lower watershed comprises about 12 %.

San Mateo Creek watershed encompasses 33 square miles and includes several reservoirs. Below the lowest reservoir, Crystal Creek Reservoir, the creek flows through rural and urban- residential areas followed by dense urban residential and commercial land use. Impervious surface estimates in the lower reaches of the creek are 38% and have lead to high bank erosion during large storm events (SWAMP, 2002).

The sampling stations were located in the lower reaches of each tributary with an "Upper" station in the freshwater reach just above the head-of-tide, and a "Lower" station within tidal reach.

Field sampling was conducted twice during the winter of 2004-2005. Samples were collected after the first rain of the winter in order to capture the potential effects of dry season pesticide usage (November - 2004). The second sampling occurred in late spring (April - 2005), after the winter rains and coinciding with the presumption of increased spring pesticide applications in urban and agricultural settings. USGS stream gauge data, available on the web, were used to determine if there was sufficient rainfall to warrant sampling (≥ 0.5"; Table 1.2).

Bedded surface sediments (~2cm) were collected targeting recently deposited sediments for analysis of toxicity, grain-size and total organic carbon (TOC), and chemistry. Table 1.3A lists all the target parameters that were analyzed and their expected method detection limits (MDLs).

The original study design required chemical concentrations of toxic pollutants to be measured in sediment from all the Upper stations of each tributary, and only measured at the Lower stations that demonstrated significant toxicity to amphipods. The San Mateo Creek Lower station was the only Lower station that was toxic in this study, and it was toxic only in November 2004. However, some of the chemistry laboratories analyzed additional Lower station samples, so additional chemistry data are reported for those Lower stations that were not toxic. Additional results are reported at all the Lower stations for mercury, methyl-mercury (for all samples for both sampling periods), and for the trace organic contaminants (for all the April samples).

One toxicity identification evaluation (TIE) was included in this study task to try out the TIE methods developed in task 3 of this project (Chapter 3) on an ambient field sample. The San Mateo Creek Upper station was evaluated by TIE methods because it was the most significantly toxic station initially sampled, and it proved to be consistent, and severely toxicity in most subsequent tests (section 1.7).

Methods for collecting field samples, sample handling, and laboratory analyses are described in the project's Quality Assurance Project Plan (Lowe and Anderson, 2005). A brief summary is presented here.

Sample Collection and Handling

Sample collection was conducted by Applied Marine Science (AMS - Livermore, CA) and the San Francisco Estuary Institute (SFEI). Sample collection, handling, and laboratory methods were the same as those employed by the RMP Status and Trends program (SFEI, 2001) with the exception that the sample collection was performed by scooping only 1-2 cm of sediments directly from the creek bed rather than using a ponar grab and scooping out 5 cm of sediment. The PRISM QAPP (SFEI, 2005) describes the equipment and sampling protocols in more detail than presented below.

Sample containers were cleaned and prepared by the analyzing laboratory, or were factory pre-cleaned, and were delivered to AMS at least one week prior to the start of sampling.

It was critical that sample contamination be minimized during collection. All sampling equipment (i.e., compositing bucket and scoops) was composed of a non-contaminating, Kynar material and was thoroughly cleaned before each use. Sampling personnel wore polyethylene gloves whenever taking or processing samples to avoid contact contamination. In addition, airborne contamination was avoided by keeping sample containers, sample scoops, and compositing bucket appropriately covered (with aluminum foil) when not in use. Sampling equipment was cleaned with soap, acid, and methanol at each sampling site prior to sample collection.

Five liters of fine-grained sediment was collected from depositional areas in the creeks. The composite sample was homogenized (by careful stirring) and aliquoted into sample containers for all analyses with the exception of the mercury and methyl-mercury samples. Undisturbed sediment, collected using the scoops, was placed directly into several small sample containers, and kept in the dark. All chemistry and ancillary samples were stored on dry ice immediately after collection. Toxicity samples were stored on wet-ice.

Samples were shipped to the analytical laboratories in insulated coolers and were prepared, handled, stored, and transported in a manner that minimized bulk loss, analyte loss, contamination, or biological degradation.

Analytical Methods
Sediment chemistry analyses were comparable to those employed by the RMP Status and Trends Monitoring Program (SFEI, 2001) and complied with data reporting expectations of the PRISM QAPP (Lowe and Anderson, 2005). Extraction and analytical methods, target method detection limits, and data quality objectives employed by this study are listed by parameter (or parameter type) in Table 1.3B.

Reporting
Summaries of the field sampling results are presented in this report as bubble maps and schematic box plots. A color gradient was used in the maps to depict the range of reported concentrations (note that the axes of some parameters do not represent the *full* range of measurements as some concentrations were disproportionately high). A circle symbol (○) indicates PRISM tributary study results and a square symbol (□) indicates RMP Status and Trends 2004-2005 results within the Estuary. Results that did not pass the QA/QC review process are not shown.

The schematic box plots present tributary results for both the Upper and Lower stations for each tributary, and the North Bay (Suisun and San Pablo Bay) and South Bay (South and Lower South Bay) regions of the Estuary as defined by the RMP Status and Trends Program (SFEI 2006). Figure 1.3 displays the statistical components represented in the box plots. The horizontal line inside the box represents the median, and the mean is indicated by a blue dot. The top and bottom of the box represent the 3rd quartile (75th percentile) and the 1st quartile (25th percentile), respectively. The distance between these two is the interquartile range (IQR). A whisker is drawn from the upper edge of the box to the maximum value within the upper fence and from the lower edge of the box to the lowest value within the lower fence. The term “fence” refers to the distance from the 25th and 75th percentiles expressed in terms of the IQR. For example, the lower fence is located at 1.5×IQR below the 25th percentile, and the upper fence is located at 1.5×IQR above the 75th percentile. The fences are not displayed in the plots in this report; however, observations that fall beyond these fences (outliers) are indicated by a square symbol

Sediment toxicity tests included the 10-d growth and survival protocol for the freshwater amphipod *Hyalella azteca* (U.S. EPA 2000) for sediments collected in upper stations, and the 10-d survival protocol for the estuarine amphipod *Eohaustorius estuarius* in the tidally influenced lower stations (U.S. EPA, 1995). The complete laboratory report for the sediment toxicity tests is included in Appendix D and contains a detailed description of the methods, QA/QC control measures, and data analysis methods.

1.3 QUALITY ASSURANCE/QUALITY CONTROL

A complete Quality Assurance/Quality Control (QA/QC) review of the analytical results showed that most results were within the data quality objectives (DQOs) outlined in the PRISM QAPP. Five DQOs were evaluated in this review: completeness, sensitivity, precision, accuracy, and blank contamination. Table 1.4 summarizes the analytical results that were outside the target DQOs. All individual field sample results and laboratory replicates in the database were appropriately qualified according to this QA review. A complete QA/QC summary is reported in Appendix B.

1.4 RESULTS

Tables 1.5a & 1.5b summarize of the field monitoring results for toxicity, sediment quality, trace elements and sums of and trace organic contaminants. Summary statistics are shown at the bottom of the tables along with regional average concentrations of In-Bay samples collected by the RMP Status and Trends program between 2004-2005. Appendix C lists all the study field sample results. The data have been compiled into a relational database comparable to SWAMP data formats (as they are defined at the time of this report), and are available upon request to SFEI.

Amphipod survival ranged from 5 to 100 percent with no toxicity observed in the Northern Estuary tributaries in either sampling period (Table 1.5a, Figure 1.4). Of the six tributaries sampled, San Mateo Creek showed sediment toxicity to amphipods at both the Upper (freshwater) and Lower (inter-tidal) stations sampled in both November (19 % and 39 % survival[1] respectively) and April (5 % and 33 % survival respectively). As a result of the persistent toxicity observed at the San Mateo Creek Upper station sediments from this location were used in the TIE presented in section 1.7 below. San Lorenzo Creek Upper station was toxic to amphipods in November (57 % survival), and the Coyote Creek Upper station in April (79 % survival).

Sediment grainsize (% Fines) and total organic carbon (TOC) ranged from 18-100 and 0.5-3.3% respectively (Figures 1.5-1.6). Average %Fines were similar in both the northern and southern tributaries (64% and 50%respectively, with an average of 57%). The lowest percentage of Fines observed in San Lorenzo Creek Upper station in November-2004. TOC concentrations were higher in April than in November with the highest concentrations found in San Mateo Creek, San Lorenzo Creek, and Napa River.

The San Mateo Creek Upper station had the highest concentrations of PAHs, PCBs, DDTs, Pyrethroids, methyl-mercury, nickel, and zinc of the tributaries sampled (Tables 1.5a and 1.5b, Figures 1.7-1.20).

Legacy contaminants, including sum of PAHs, PCBs and DDTs, were detected at all stations (Figures 1.7-1.9). Average sum of PAHs in the North Bay tributaries were about half the average RMP North Bay concentrations (2004-2005; Table 1.5b), while South Bay tributary averages were similar to the RMP South Bay average (2004-2005). Average North Bay tributary concentrations of the sum of PCBs were the same as the RMP North Bay average (3 µg/kg). However, average South Bay tributary concentrations for the sum of PCBs were three times higher than the RMP South Bay average (17 and 6 µg/kg respectively). Average North Bay tributary sum of DDT

[1] % Survival normalized to control.

concentrations were three times higher than the RMP North Bay average (7 and 2.1 µg/kg respectively), while the South Bay tributary average was fourteen times higher than the RMP South Bay average (21 and 1.5 µg/kg respectively). The San Mateo Creek Upper station had the highest concentrations of sum of PCBs and sum of DDTs during the November and April sampling periods (35 and 34 ug/kg PCBs, and 64 and 37 µg/kg DDTs respectively).

Six of thirteen pyrethroid compounds currently in use, were analyzed in this study as these were the considered the more prevalent (and detectable) compounds at the time of the initial study plan. The target compounds were: bifenthrin, cyfluthrin, cypermethrin, esfenvalerate, lambda-cyhalothrin, and permethrin (Table1.5b, Figures 1.10-1.11). Only four of these six pyrethroids were detected in the ambient samples (esfenvalerate, and lambda-cyhalothrin were below detection in all samples), with bifenthrin being the most prevalent compound detected. This finding is consistent with another study conducted in the region during the same time period (Amweg *et al.,* 2006). Sum of Pyrethroids were detected in sediment from all six tributaries in the November samples, and four of the tributaries in the April samples (no pyrethroids were detected in Petaluma River or Suisun Creek in April).

The San Mateo Creek Upper station was the only location where four of the six pyrethroids analyzed were found above detection limits of 1-2 µg/kg (Figure 1.11). The San Mateo Creek Upper station had the highest concentrations of bifenthrin, and permethrin in November (10.3 and 20.5 µg/kg respectively). Cypermethrin and cyfluthrin were only found at the San Mateo Creek Upper station in November (4.2 and 8.6 µg/kg respectively).

Bifenthrin was the only pyrethroid detected in all six tributaries at least once. Detected concentrations ranged from 1.1 to 6.7 µg/kg in the North Bay tributaries, and 1.0 to 10.3 µg/kg in the South Bay tributaries. Permethrin was detected in four samples from three tributaries (Suisun Creek, San Mateo Creek, and San Lorenzo Creek) in the November samples (Figure 1.11).

Average Sum of PBDE concentrations for the South Bay tributaries were more than two times higher than the average North Bay tributary concentrations (8.4 and 3.6 µg/kg respectively; Table 1.5b and Figure 1.12). The RMP only reported BDE 47 concentrations in 2005. Therefore the North and South Bay tributary concentrations for PBDEs are compared to RMP North Bay and South Bay results (2004-2005) based only on that compound (Figure 1.13). The North Bay tributary BDE 47 concentrations were similar to the RMP North Bay results (2004-2005) with the exception of Petaluma River which was higher than the 75th percentile of the RMP North Bay data (2004-2005). South Bay tributary concentrations were significantly higher than the RMP South Bay concentrations (2004-2005) with San Lorenzo Creek having the broadest range of concentrations.

Average trace element concentrations in the North Bay tributaries were higher than the RMP North Bay average (2004-2005) for silver, mercury, methyl-mercury, and lead (ratios ranged from 2.3 – 3.5; Table 1.5a). Methyl-mercury and lead were the only average South Bay tributary trace element concentrations that that were nearly twice as high as the RMP South Bay average (2004-2005; ratios were 1.9 and 1.8 respectively). In general, arsenic, cadmium, iron, and selenium sediment concentrations were higher in the Estuary than in the tributaries studied (Table 1.5a).

San Mateo Creek had the highest concentrations of four metals in April (copper (67 mg/kg), methyl-mercury (5.31 µg/kg), nickel (197 mg/kg), and zinc (228); Table 1.5a, Figures 1.15, 1.18, 1.19, and 1.20)). Napa River had the highest mercury concentration in April (1.53 mg/kg: two times higher than the next highest concentrations measured in this study; Figure 1.17). Methyl mercury was high in Suisun Creek in November and Napa River in April. Suisun Creek and Petaluma River had the highest magnesium concentration (1134 and 1115 mg/kg respectively) (Table 1.5, Figure 1.7).

As mentioned above, San Mateo Creek showed the lowest amphipod survival in this study and was targeted for implementing a TIE evaluation using recently developed techniques to identify if pyrethroid pesticides were contributing to the observed toxicity. The following section describes that effort.

1.5 TOXICITY IDENTIFICATION EVALUATION – SAN MATEO CREEK UPPER

Sediments at both upper and lower San Mateo Creek were significantly toxic to amphipods in November 2004 and April 2005 (Table 1.5a). Additional sediment was collected in May 2005 for initial TIE exposures (Tables1.6 and 1.7). Sediment and interstitial water from the San Mateo Creek Upper station (SANMATCRKUP) was significantly toxic to *Hyalella azteca*. Although the interstitial water was significantly toxic at full strength, it contained less than 2 toxic units, and the signal was not considered to be sufficiently strong for a TIE. The San Mateo Creek Lower sample (SANMATCRKLWR) collected at this time was not significantly toxic to warrant conducting a TIE. In addition, subsequent samples collected from SANMATCRKLWR later in the year continued to demonstrate no or weak toxicity, so no TIEs were conducted at this station (Table 1.7).

TIE Methods

Because of consistent toxicity was observed in sediments from the San Mateo Creek Upper station, a Toxicity Identification Evaluation (TIE) was conducted on sediment from this station. The following solid-phase TIE treatments were performed on undiluted sediment. Treatment blanks consisted of laboratory formulated sediment that underwent the same treatment as the sample. Formulated sediment was prepared using equal parts Salinas River, California reference site sediment and clean, kiln-dried sand (#60, RMC Pacific Materials, Monterey, CA, USA). The sediment was amended with 0.75% organic peat moss (Uni-Gro, Chino, CA, USA). One kilogram (dry weight) of formulated sediment was prepared by combining 500g reference sediment, 500g sand, and 7.5g peat with 350 mL clean dilution water. Phase I TIE treatments consisted of additions of amendments to the sediment, or treatments of the overlying water. Sediment amendments included Ambersorb and SIR-300. Overlying water treatments consisted of addition of carboxylesterase enzyme, bovine serum albumin (BSA), and piperonyl butoxide (PBO). The baseline treatment was also performed at a colder temperature to provide additional evidence of toxicity due to pyrethroids. Phase II TIE procedures consisted of separating the Ambersorb from the sediment, extracting it with solvent, and spiking control water with the acetone eluate as a toxicity return procedure. Sediment was analyzed for three classes of pesticides (organochlorine, organophosphate, and pyrethroid pesticides), PAHs, and metals in San Mateo Creek Upper sediment in conjunction with this initial TIE, as well as in the Ambersorb acetone eluate generated for the Phase II TIE procedures.

The following is a summary of the solid-phase TIE methods:
• Baseline - Toxicity test on un-manipulated sample. Five 250-mL replicate beakers each containing approximately 50g sediment and 200 mL clean dilution water.

• Ambersorb 563® (Rohm and Haas, Spring House, PA, USA), a carbonaceous, non-polar resin, was prepared by rinsing it thoroughly with Nanopure® water. Ten percent Ambersorb by wet weight was added to sediment (Kosian *et al.* 1999, West *et al.* 2001). Treated sediment was homogenized for 24 hours on a roller apparatus and loaded into exposure chambers. A dilution blank was created by combining test sediment with 10% formulated sediment, and an Ambersorb blank was created by adding 10% Ambersorb to formulated sediment. At test termination the sediment was sieved through a series of screens ranging from 250-400 μm to retain the Ambersorb. The Ambersorb was then eluted by loading a column with approximately 7.5g resin and pumping 10 mL of acetone through the column at a rate of 1 mL per minute. Post-column acetone was collected in a 50 mL beaker and evaporated to a final volume of one mL. The final volume was combined with 100 mL clean dilution water to create the eluate sample for toxicity testing with *H. azteca*. The 100 mL water volume was chosen because *H. azteca* are tolerant of 1% acetone, and we are attempting to maximize the return of toxicity and contaminants. The magnitude of toxicity and the concentrations of contaminants in the Ambersorb eluate sample are used in the weight-of-evidence for determining the cause of toxicity. They demonstrate the presence of toxicity and contaminants in the original sediment sample, but are not necessarily reflective of the actual sediment of interstitial water concentrations. An Ambersorb elution blank was prepared by performing the above treatments on Ambersorb that had been combined with formulated sediment. A 1% acetone blank was also tested.

• SIR-300 (ResinTech, West Berlin, NJ) is a macroporous weak acid cation exchange resin based on the iminodiacetate acid functional group, which has chelating properties for heavy metal ions even in conditions with high calcium concentrations. After preparation, SIR-300 can be mixed into sediment to reduce cationic metal bioavailability (Burgess *et al.* 2000). Ten percent SIR-300 (wet weight) was added to the sediment in a 500 mL mixing jar. Treated sediment was homogenized for 24 hours on a roller apparatus, and loaded into exposure chambers. A dilution blank was created by combining test sediment with 10% formulated sediment, and an SIR-300 blank was created by adding 10% SIR-300 to formulated sediment. At test termination the sediment was sieved through a series of screens ranging from 250-400 μm to retain the SIR-300. The SIR-300 was then eluted by loading a column with approximately 7.5g resin and pumping 10 mL of 1N hydrochloric acid through the column at a rate of 1 mL per minute. Post-column acid was combined with 100 mL clean dilution water and neutralized to create the eluate sample for toxicity testing with *H. azteca*. An SIR-300 elution blank was prepared by performing the above treatments on SIR-300 that had been combined with formulated sediment. An acid blank was also tested.

• The enzyme carboxylesterase (Sigma-Aldrich, St. Louis, MO) hydrolyzes ester-containing compounds such as pyrethroids to their corresponding acid and alcohol, which are generally not toxic (Wheelock *et al.* 2004 and 2006). Carboxylesterase (500x) was added to the overlying water on the day of test initiation, six hours prior to the addition of amphipods. This allowed for interaction between the enzyme and pyrethroids. The enzyme was added based on units of activity. One 'x' of enzyme activity equals 0.0025 units of enzyme per mL of sample, therefore at 500x, 1.25 units per mL were added. Enzyme strength is unique for each lot purchased (Wheelock *et al.*

2004). To control for the binding of contaminants to the protein base of the enzyme, a separate set of replicates was treated with bovine serum albumin (BSA). Reduction of toxicity by the enzyme, and not the BSA, confirms the presence of pyrethroids. The enzyme and protein treatments were given daily booster shots of BSA and carboxylesterase.

• Piperonyl butoxide (Sigma-Aldrich, St. Louis, MO) is used to block the metabolic activation of acetylcholinesterase-inhibiting organophosphate pesticides (Ankley and Collyard, 1995). It is also a potent synergist of pesticide toxicity, because it inhibits their metabolism (Ware 1989, Kakko *et al.* 2000). The PBO treatment contained 500 μg/L of PBO in the water overlying the sediment. Decreased toxicity with the addition of PBO suggests the presence of organophosphate pesticides. Increased toxicity with the addition of PBO suggests the presence of pyrethroids. There is also some evidence that PBO increases toxicity caused by DDT (Brandt *et al.* 2002), but we are unaware of specific studies exposing *H. azteca* to mixtures of PBO and DDT.

• An additional baseline treatment was conducted at 15ºC because the toxicity of some organochlorine and pyrethroid pesticides increases with decreasing temperature (Ware 1989).

TIE Physical and Chemical Measurements

Water quality parameters of dissolved oxygen, pH and conductivity were measured using a Hach SensION© selective ion meter with appropriate electrodes; and ammonia was measured using a Hach 2010 spectrophotometer. Temperature was measured using a continuously recording thermograph and thermometer. Concentrations of the organophosphate pesticides chlorpyrifos and diazinon were measured using enzyme-linked immunosorbent assays (ELISA, Strategic Diagnostics Inc, Newark, DE).

Sediment was analyzed for three classes of pesticides, organochlorine compounds (U.S. EPA Method 8081), pyrethroids (U.S. EPA Method 1660), and organophosphates (U.S. EPA Method 8141). All analyte identifications were confirmed by gas chromatography-mass spectrophotometer or liquid chromatograph-mass spectrophotometer. Acetone eluates of the Ambersorb and methanol eluates of the HLB treatments were also analyzed for the same three classes of pesticides. Ambersorb eluates were further analyzed using direct injection of the pure solvent into the gas chromatograph. Sediment was also analyzed for metals (US EPA Method 1638) and polycyclic aromatic hydrocarbons (PAHs US EPA Method 8270).

TIE Data Interpretation

Treatment blanks were evaluated to determine if sample manipulations added toxic artifacts. Treatment data were then compared to one another based on organism response.

TIE Results

Amphipod survival in the baseline SANMATCRKUP sample was 16% (Table 1.8). All treatment blanks conducted as part of this TIE demonstrated acceptable survival. Ten and 20% dilution blanks increased survival to 22% and 40%, respectively. Addition of 10% Ambersorb to the sediment increased survival to 42%. While Ambersorb alone increased amphipod survival, complete mortality was observed when Ambersorb was combined with the cation exchange resin SIR-300. An acetone elution of the Ambersorb returned toxicity when the acetone was spiked into clean dilution water, indicating the toxicity was caused by an organic contaminant.

Addition of the carboxylesterase enzyme to the sediment overlying water increased amphipod survival to 60%. Addition of PBO to the sediment overlying water caused complete mortality. Decreasing test temperature from 25°C to 15°C also caused complete mortality, and decreased the efficiency of the enzyme treatment. Reduction of toxicity with carboxylesterase and increase of toxicity with PBO and reduced temperature characterize the cause of toxicity as a pyrethroid.

A second solid-phase TIE was conducted with the enzyme treatment and this TIE included addition of bovine serum albumin (BSA). BSA is added to account for toxicity reduction resulting from the binding of contaminants to the protein base of the enzyme (Table 1.9). Baseline survival was 24% in untreated SANMATCRKUP sediment and the addition of the enzyme increased survival to 72%. Addition of BSA increased survival to 60%, which was not significantly different from the enzyme treatment. Reduction of toxicity with the addition of BSA suggests that the some of the reduction of SANMATCRKUP sample toxicity could have been due to reduced contaminant bioavailability, rather than the esterase activity of the enzyme.

A third solid-phase TIE was conducted to determine if addition of greater Ambersorb mass further reduced toxicity of SANMATCRKUP sediment. Three Ambersorb additions were tested, 10%, 15% and 20%. Baseline survival was 2% (Table 1.10). The addition of 10% Ambersorb increased survival to 28%, but the addition of 15% Ambersorb only increased survival to 10%. Addition of 20% Ambersorb increased survival to 52%, but this response was not significantly different from the 20% dilution blank, indicating that the increase in survival could be due to dilution alone. Acetone elution of both 10% and 20% Ambersorb treatments returned toxicity to clean dilution water, suggesting that toxic concentrations of organic chemicals were eluted from the Ambersorb.

Sediment was analyzed for organochlorine, organophosphate, and pyrethroid pesticides, PAHs, and metals, and the 10% Ambersorb acetone extract from the third solid-phase TIE was analyzed for organochlorine, organophosphate, and pyrethroid pesticides. The sediment contained concentrations of two pyrethroids, cyfluthrin and cypermethrin, several metals, and organochlorine pesticides (Table 1.11). The solid-phase concentration of cyfluthrin was below the sediment LC50 (Amweg *et al.* 2005). The concentration of cypermethrin in this sample was below the LC50 for cypermethrin, based on a 10 day exposure, reported by Maund *et al.* (2002). The organic carbon normalized total DDT concentration, was well below the effects threshold of Nebeker *et al.* (1989). Concentrations of chromium and nickel were also above their PEC values, but because SIR-300 did not reduce toxicity, it is unlikely metals played a significant role in the cause.

The acetone extract of the Ambersorb contained toxic concentrations of cyfluthrin, DDD (p,p'), and DDT (p,p') (Table 1.7). The concentration of cyfluthrin was approximately 9 times the top 10^{th} percentile water-only LC50 (Solomon *et al.* 2001, Amweg *et al.* 2005), and the concentrations of DDD (p,p'), and DDT (p,p') were greater than the water-only LC50s reported by Hoke *et al.* (1994).

It should be noted that although several chemicals were detected in both the sediment and Ambersorb eluates, the concentrations in the Ambersorb eluate sample may not reflect their concentrations in the sediment interstitial water. Interstitial water chemical concentrations were not measured in this study.

San Mateo Creek UPPER TIE Summary

Identifying chemicals responsible for sediment toxicity requires multiple lines of evidence that combine chemical analyses with the results of solid-phase and interstitial water TIEs. Toxicity of San Mateo Creek Upper sediment was greatly reduced with the addition of the carbonaceous resin Ambersorb in two solid-phase TIEs. In both cases, acetone extracts of the Ambersorb were highly toxic when spiked into clean water. These results suggest that toxic concentrations of organic chemicals were present in San Mateo Creek Upper sediment.

Sediment toxicity was reduced when the carboxylesterase enzyme was added to sediment overlying water in two TIEs, and these results suggest pyrethroid pesticides were partly responsible for toxicity. However, toxicity was also reduced with the addition of Bovine Serum Albumin, a protein source added to differentiate between the esterase activity of the enzyme, and reduction in pyrethroid toxicity due to its binding to the enzyme surface. BSA reduced sediment toxicity to a lesser degree than the enzyme, suggesting that both sorption and esterase activity reduced sample toxicity. Partial reduction of toxicity by the enzyme suggests that pyrethroids are partly responsible.

Two other lines of evidence support the conclusion that pyrethroids are partly responsible for toxicity of San Mateo Creek Upper sediment. Toxicity greatly increased with the addition of the metabolic inhibitor PBO, and toxicity increased when the sample was tested at lower temperature. However, previous studies have suggested that DDT is more toxic at lower temperatures (Ware *et al.* 1989), and PBO may also potentiate toxicity of this pesticide.

Chemical analyses of San Mateo Creek Upper sediment conducted in conjunction with the TIE showed two pyrethroids in the sample, cyfluthrin and cypermethrin. Concentrations of both pyrethroids were lower than their respective LC50s. In addition DDT metabolite concentrations were below LC50 values. Concentrations of cyfluthrin, DDD (p,p’), and DDT (p,p’) in the Ambersorb eluates were above published water-only LC50 values.

The solid-phase TIE treatments characterized the cause of toxicity as due to an organic chemical. Additional Phase II treatments (enzyme and BSA) and solid-phase and Ambersorb eluate chemical analyses identified pyrethroid pesticides as the possible cause of toxicity. The TIE evidence also suggest DDT metabolites could have played a role in sediment toxicity at this site. Sediments in the San Mateo Creek Upper station demonstrate temporal variability in pyrethroid concentrations. For example, samples from November 2004 contained four pyrethroids, and bifenthrin concentrations at this time were within the toxic range. No pyrethroids were detected in the April 2005 samples, but cyfluthrin and cypermethrin were detected in the May 2005 samples used in the TIE. Additional monitoring at this site would be useful to document sources of contaminants and their variability. TIEs conducted in conjunction with monitoring designed to better document temporal variability would be useful to more fully differentiate causes of sediment toxicity in San Mateo Creek.

1.6 CONCLUSIONS

This study characterized sediments from six Bay Area tributaries for the potential to cause toxicity to amphipods, grain-size, total organic carbon, a suite of toxic pollutants including pyrethroids and compounds used as flame retardants (PBDEs). Sampling and analytical methodologies were comparable to the RMP-Status and Trends program. The results provide a base-line, description of selected pyrethroid concentrations in urban tributaries in 2004-2005 around the Estuary, when sales of those pesticides have been increasing in recent years.

Of the six tributaries studied, only the South Bay tributaries were toxic to amphipods during the two sampling events (Nov-2004 and April-2005). San Mateo Creek was toxic to both freshwater and estuarine amphipods during both sampling events, and had the lowest % survival and highest contaminant concentrations for important legacy and emerging pollutants. The TIE performed on sediments from the Upper station of San Mateo Creek indicated that the toxicity was possibly caused by pyrethroids and/or DDT metabolites. Two other sediment samples were toxic in this study, San Lorenzo Creek Upper station in November-2004, and Coyote Creek Upper station in April-2005.

Pyrethroids were detected in all tributaries studied with higher concentrations observed in November than in April. Of the six pyrethroids measured, only bifenthrin and permethrin were found in more than one tributary. Only six of thirteen pyrethroids in use in California were measured in this study (because at the time of the project planning it was believed that the six targeted pyrethroids comprised the most prevalent and toxic compounds), making it difficult to accurately characterize the role of these compounds in evaluating the ecological condition of the targeted tributaries. The lack of a comprehensive pyrethroid analysis may partially explain the less definitive results of the TIE conducted at the San Mateo Creek Upper station as a more comprehensive chemical analysis of the confirmation sample, the Ambersorb acetone extract from the third solid-phase TIE, might have provided additional information to tease out the relative contributions of the organochlorine, organophosphate, and pyrethroid pesticides to observed toxicity in that sample.

In general, the South Bay tributary sediments (San Mateo Creek, San Lorenzo Creek, and Coyote Creek) were more toxic to amphipods and tended to have higher concentrations of measured contaminants (including: PAHs, PCBs, DDTs, pyrethroids, PBDEs, cadmium, methyl-mercury, nickel, and selenium) than the North Bay tributary sediments (Petaluma River, Napa River, and Suisun Creek). Average South Bay tributary concentrations of PCBs, DDTs, BDE 47, and methyl-mercury were much higher than average concentrations observed in the South Bay (RMP Status and Trends program (2004-2005), pyrethroids were not measured by the RMP so could not be compared).

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Table 1.1. Study Participants and Target Parameters.

Project Management, Logistics, Information Management	Ms. Sarah Lowe[1], Ms. Cristina Grosso, Mr. John Ross, Ms. Amy Franz, Mr. Predrag Stevonovich, and Dr. Donald Yee San Francisco Estuary Institute (SFEI), Oakland, CA
Logistics	Mr. Paul Salop, Mr. Bryan Bemis, and Ms. Basia Hajduczek Applied Marine Sciences (AMS), Livermore, CA
Sediment Trace Organic Chemistry PAHs, Alkylated PAHs, PCBs, Synthetic Biocides including: Chlordanes, HCHs, Cyclopentadienes, Pyrethroids	Dr. Dave Crane, Mr. Abdu Mekebri and Mr. Loc Nguyen California Dept. of Fish & Game, Water Pollution Control Laboratory (CDFG-WPCL), Rancho Cordova, CA
Sediment Trace Element Chemistry, & Ancillary Sediment Characteristics Ag, Al, As, Cd, Cu, Hg, meHg, Mn, Ni, Pb, Se, Zn; Grain-size, Total Organic Carbon, Total Nitrogen	Dr. Colin Davies and Ms. Elizabeth Madonick Brooks-Rand Ltd. (BRL), Seattle, WA
	Dr. Russ Flegal and Ms. Genine Scelfo UC Santa Cruz (UCSCDET), Santa Cruz, CA
Sediment Toxicity Testing 10-day amphipod tests	Mr. Brian Anderson[1], and Mr. Bryn Phillips Marine Pollution Studies Lab (UCD-MPSL), Granite Canyon, CA

[1] Principal Investigators

Table 1.2. Station location information, date sampled, latitude/longitude, and stream gauge graphics.

Stream gauge graphics are from the USGS Real Time Stream Gauge website and show stream height prior to the November and April sampling events.

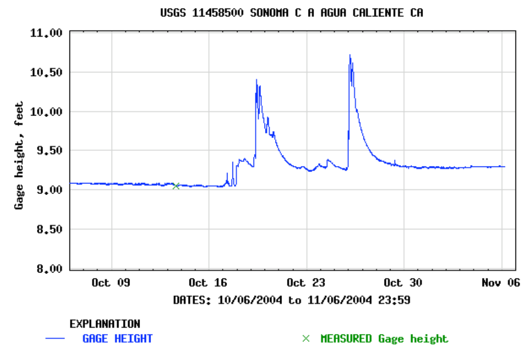
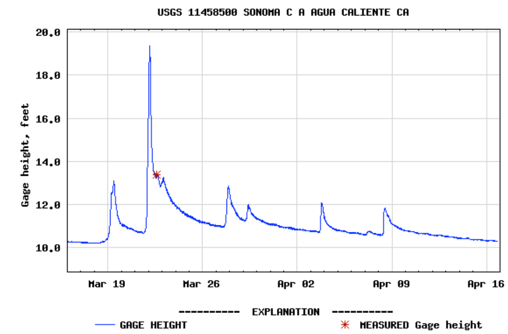
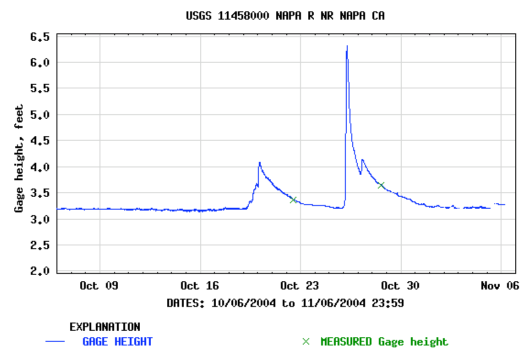
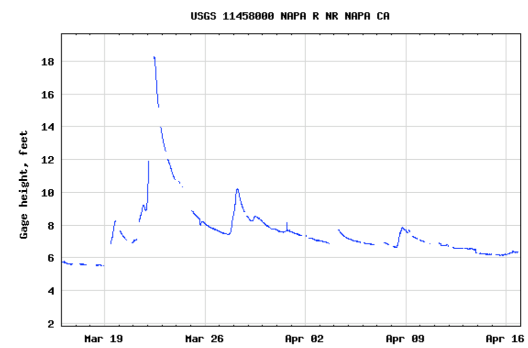
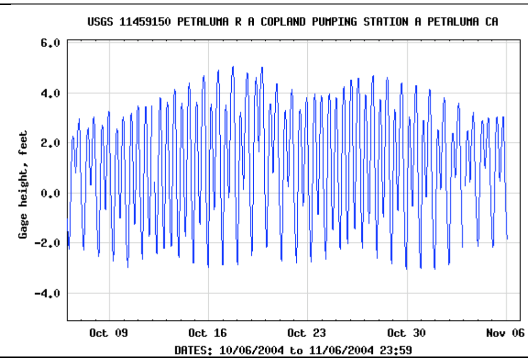
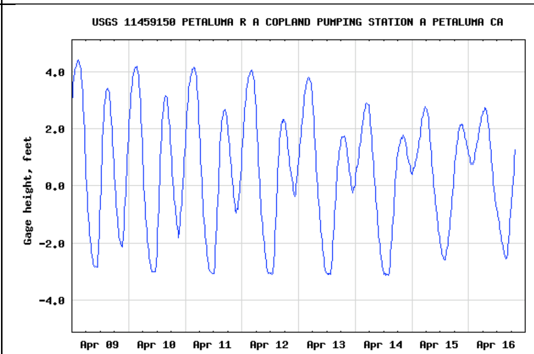
North Bay Tributaries	November Stream Gauge Heights	April Stream Gauge Heights
Suisun Creek Upper: (fresh water) (Rockville Rd and Willotta Dr. Suisun City, CA) Sampled the quieter, upstream portion of the Creek. Date Sampled: 11/3/2004 and 4/19/2005 NAD83 Latitude: 37.5696; Longitude: 122.3178 Suisun Creek Lower: (tidal) (Chadbourne Rd. creek overpass just past Jacksnipe Rd. Suisun City, CA) Sampled the downstream side of the overpass. Date Sampled: 11/3/2004 and 4/19/2005 NAD83 Latitude: 37.5741; Longitude: 122.3065		
Napa River Upper: (fresh water) (1st Street at Copia. Napa, CA) Sampled River below the Northwest corner of parking lot. Date Sampled: 11/2/2004 and 4/19/2005 NAD83 Latitude: 38.3021; Longitude: 122.2816 Napa River Lower: (tidal) (John F. Kennedy Park downstream of town. Napa, CA) Sampled off of wharf. Date Sampled: 11/2/2004 and 4/19/2005 NAD83 Latitude: 38.2655; Longitude: 122.2835		
Petaluma River Upper: (fresh water/tidal) (East Washington St. and Weller. Petaluma, CA) Date Sampled: 11/2/2004 and 4/20/2005 NAD83 Latitude: 38.2357; Longitude: 122.6371 Petaluma River Lower: (tidal) (Gilardi's Lakeville Marina. Lakeville, CA) Date Sampled: 11/2/2004 and 4/20/2005 NAD83 Latitude: 38.1977; Longitude: 122.5476		

Table 1.2 (continued). Station location information

<table>
<tr><th>South Bay Tributaries</th><th>November Stream Gauge Heights</th><th>April Stream Gauge Heights</th></tr>
<tr><td>San Lorenzo Creek Upper: (fresh water)
(Via Bregani and Madeline. San Lorenzo, CA)

Date Sampled: 11/3/2004 and 4/20/2005
NAD83 Latitude: 37.6820; Longitude: 122.1431

San Lorenzo Creek Lower: (tidal)
(Via Murieta and Via Sorrento. San Lorenzo, CA)

Date Sampled: 11/3/2004 and 4/20/2005
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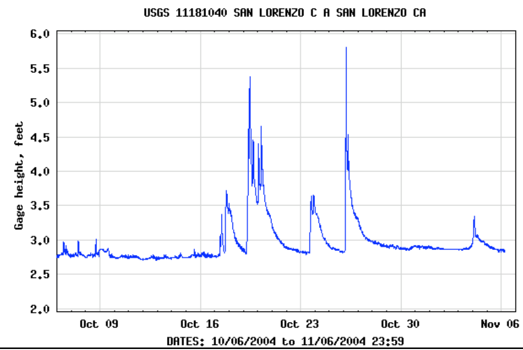

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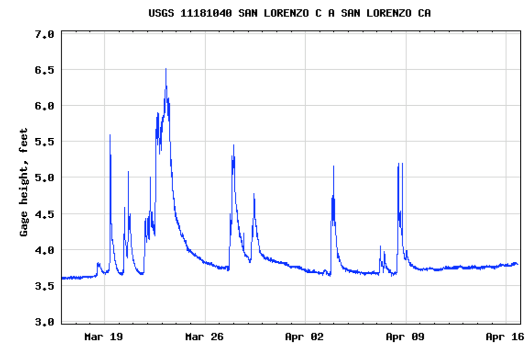

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<tr><td>Coyote Creek Upper: (fresh water)
(Murphy Ranch Rd. and Technology Dr. Milpitas, CA)

Date Sampled: 11/1/2004 and 4/18/2005
NAD83 Latitude: 37.4183; Longitude: 122.9303

Coyote Creek Lower: (tidal)
(RMP station BW10, N. McCarthy Blvd./ just over the overpass heading south from Dixon Landing Rd. Milpitas, CA)

Date Sampled: 11/1/2004 and 4/18/2005
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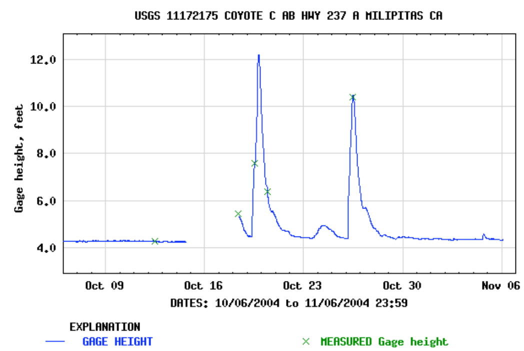

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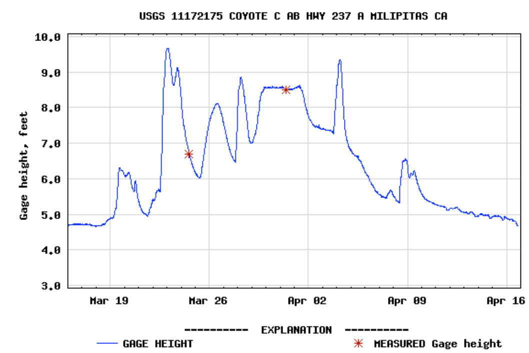

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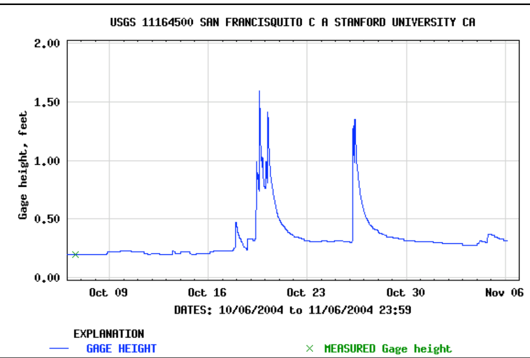
<tr><td></td><td></td><td></td></tr>
<tr><td>San Mateo Creek Upper: (fresh water)
(in Gateway Park, 3rd Ave. San Mateo, CA)

Date Sampled: 11/4/2004 and 4/18/2005
NAD83 Latitude: 37.5696; Longitude: 122.3178

San Mateo Creek Lower: (tidal)
(3rd Ave. and J. Hart Clinton Drive. San Mateo, CA) Sampled under the creek overpass.

Date Sampled: 11/4/2004 and 4/18/2005
NAD83 Latitude: 37.5741; Longitude: 122.3065</td><td>



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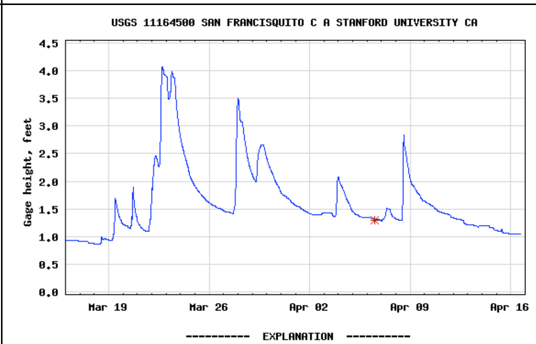

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Table 1.3A. List of Parameters analyzed in the PRISM field study component.

Sediment Quality Parameters	**Reporting Units**
% clay (< 4 µm)	% dry weight
% silt (4 µm–62 µm)	% dry weight
% sand (2 mm > 62 µm)	% dry weight
% gravel (> 2 mm)	% dry weight
% solids	% dry weight
Total Organic Carbon	%

Toxicity Tests — Sediment	**Reporting Units**
(*Hyalella azteca, Eohaustorius estuarius)*	
Sediment Toxicity – (Amphipod) % Survival	%
Sediment Toxicity – (QA/QC measures: sulfide, pH, etc.)	various

Trace elements analyzed in sediment samples:
Target Method Detection Limits (MDLs) are in parentheses following the reporting units.

	Reporting Units (MDL) dry weight
Aluminum (Al)	mg/kg (200)
Arsenic (As)	mg/kg (0.2)
Cadmium (Cd)	mg/kg (0.001)
Copper (Cu)	mg/kg (2)
Iron (Fe)	mg/kg (200)
Lead (Pb)	mg/kg (0.5)
Manganese (Mn)	mg/kg (20)
Mercury (Hg)	mg/kg (0.00001)
Methyl-mercury (MeHg)	µg/kg (0.005)
Nickel (Ni)	mg/kg (5)
Selenium (Se)	mg/kg (0.01)
Silver (Ag)	mg/kg (0.001)
Zinc (Zn)	mg/kg (5)

Table 1.3A (continued). Parameter List

Trace organic parameters in sediment (µg/kg dry weight):		
PAHS (Target MDL: 5 µg/kg)	**SYNTHETIC BIOCIDES** (Target MDL: 1 µg/kg)	**OTHER SYNTHETIC COMPOUNDS** (Target MDL: 1 µg/kg)
1-Methylnaphthalene 2,3,5-Trimethylnaphthalene 2,6-Dimethylnaphthalene 2-Methylnaphthalene Biphenyl Naphthalene 1-Methylphenanthrene Acenaphthene Acenaphthylene Anthracene Fluorene Phenanthrene Benz(a)anthracene Chrysene Fluoranthene Pyrene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(e)pyrene Benzo(k)fluoranthene Dibenz(a,h)anthracene Perylene Benzo(ghi)perylene Indeno(1,2,3-cd)pyrene Dibenzothiophene	**Cyclopentadienes** Aldrin Dieldrin Endrin **Chlordanes** alpha-Chlordane cis-Nonachlor gamma-Chlordane Heptachlor Heptachlor Epoxide Oxychlordane trans-Nonachlor **DDTs** o,p'-DDD o,p'-DDE o,p'-DDT p,p'-DDD p,p'-DDE p,p'-DDT **HCH** alpha-HCH beta-HCH delta-HCH gamma-HCH **Pyrethroids:** Bifenthrin Cyfluthrin Cypermethrin Esfenvalerate Lambda-cyhalothrin Permethrin **Other Synthetic Biocides** Chlorpyrifos (porewater only) Diazinon (porewater only) Hexachlorobenzene Mirex	**PCB congeners (IUPAC numbers):** 8, 18, 28, 31, 33, 44, 49, 52, 56, 60, 66, 70, 74, 87, 95, 97, 99, 101, 105, 110, 118, 128, 132, 138, 141, 149, 151, 153, 156, 158, 170, 174, 177, 180, 183, 187, 194, 195, 201, 203 **Polybrominated Diphenyl Ethers (PBDEs):** 017, 028, 047, 066, 085, 099, 100, 138, 153, 154,183, 190

Table 1.3B. Laboratory analytical methods.

Laboratory methods used to analyze sediments from the PRISM field monitoring component. Some organic compounds are grouped by parameter type. Table includes the name of analyzing laboratory, laboratory methods, method detection limits (MDL), reporting units, and data quality objectives.

Sediment Chemistry	Laboratory[1]	Extraction Method	Analytical Method	Analytical Instrument	MDL	Units	Precision	Accuracy
Trace Elements							+/- 25%	+/- 25%
Ag	BRL	EPA Draft 1638M		ICPMS	0.001	mg/kg		
Al	BRL	EPA Draft 1638M		ICPMS	200	mg/kg		
As	BRL	BR-0020 rev.003 (EPA 1632 M)		HGAA	0.2	mg/kg		
Cd	BRL	EPA Draft 1638M		ICPMS	0.001	mg/kg		
Cu	BRL	EPA Draft 1638M		ICPMS	2	mg/kg		
Fe	BRL	EPA Draft 1638M		ICPMS	200	mg/kg		
Hg (total)	UCSCDET	Bloom & Crecelius, 1987		ICPMS	0.0001	mg/kg		
meHg	UCSCDET	SOP-CALFED.D07		ICPMS	0.01	ug/kg		
Mn	BRL	EPA Draft 1638M		ICPMS	20	mg/kg		
Ni	BRL	EPA Draft 1638M		ICPMS	5	mg/kg		
Pb	BRL	EPA Draft 1638M		ICPMS	0.5	mg/kg		
Se	BRL	BR-0020 rev.003 (EPA 1632 M)		HGAA	0.01	mg/kg		
Zn	BRL	EPA Draft 1638M		ICPMS	5	mg/kg		
%solids	All Chem labs	SM 2540B (EPA 160.3)						
Sediment Quality							+/- 25%	+/- 25%
Total Organic Carbon	UCSCDET		EPA 9060		0.02	%		
Total Nitrogen	UCSCDET		EPA 9060		0.001	%		
Grain Size (gravel, sand, silt, & clay)	UCSCDET		UCSCDET-GSZ	Sedigraph	0.1	%		

[1] See Table 1.1 for more laboratory information.

Table 1.3B (continued). Laboratory methods used to analyze sediments from the PRISM field monitoring component. Some organic compounds are grouped by parameter type. Table includes the name of analyzing laboratory, laboratory methods, method detection limits (MDL), reporting units, and data quality objectives.

Sediment Chemistry (continued)	Laboratory[1]	Extraction Method	Analytical Method	Analytical Instrument	MDL	Units	Precision	Accuracy
Organic contaminants							+/- 35%	+/- 35%
Chlorpyrifos (pore water)	UCD-MPSL		ELISA SOP 3.3		0.05	ug/L		
Diazinon (pore water)	UCD-MPSL		ELISA SOP 3.3		0.03	ug/L		
PAHs	CDFG-WPCL	EPA 3545_3640A_3610B_3630C	EPA 8270M	GC-MS	5	ug/kg		
Polybrominated Diphenyl Ethers (PBDEs)	CDFG-WPCL	EPA 3545_3640A_3620B	EPA 8082M	GC-ECD*	1	ug/kg		
PCBs (Aroclors)	CDFG-WPCL	EPA 3545_3640A_3620B	Newman *et al.* , 1988			ug/kg		
PCBs (individual congeners)	CDFG-WPCL	EPA 3545_3640A_3620B	EPA 8082M	GC-ECD*	1	ug/kg		
Synthetic Biocides	CDFG-WPCL	EPA 3545_3640A_3620B	EPA 8081AM	GC-ECD*	1	ug/kg		
Sediment Toxicity								
Sed Tox (*H. azteca*)	UCD-MPSL	U.S. EPA 2000	10-day solid phase			%		
Sed Tox (*E. estuarius*)	UCD-MPSL	U.S. EPA 1994	10-day solid phase			%		

[1] See Table 1.1 for more laboratory information.

* GC-ECD with GC-MS confirmation

Table 1.4. Summary of analytes that were outside the acceptable data quality objectives.

Analytical results that were outside the acceptable data quality objectives (DQOs) based on the PRISM QAPP (Lowe and Anderson, 2005). Five DQOs were evaluated in the quality assurance review: completeness, sensitivity, precision, accuracy, and blank contamination.

Parameter Type	Analyte	November 2004	April 2005
PAHs	2,3,5-Trimethylnaphthalene	Poor Accuracy	
	Benzo(ghi)perylene		Blank Contamination
Alkylated PAHs	C1-Fluoranthenes_Pyrenes		Poor Accuracy
	C1-Fluorenes	Poor Accuracy	
	C1-Naphthalenes	Poor Accuracy	
	C1-Phenanthrenes_Anthracenes		Poor Accuracy
	C2-Naphthalenes	Poor Accuracy	
	C3-Naphthalenes	Poor Accuracy	
PCBs	PCB 008	Poor Accuracy	
	PCB 018		Blank Contamination
	PCB 028	Blank Contamination	Blank Contamination
	PCB 031	Blank Contamination	Blank Contamination
	PCB 044	Blank Contamination	Blank Contamination
	PCB 052	Blank Contamination	Blank Contamination
	PCB 066		Blank Contamination
	PCB 070	Blank Contamination	Blank Contamination
	PCB 095	Blank Contamination	Blank Contamination
	PCB 101	Blank Contamination	Blank Contamination
	PCB 110	Blank Contamination	Blank Contamination
	PCB 118	Blank Contamination	Blank Contamination
	PCB 138		Blank Contamination
Synthetic Biocides	p,p'-DDT	Poor Accuracy	Poor Accuracy
	alpha-Chlordane	Poor Accuracy	
	gamma-Chlordane	Poor Accuracy	Poor Accuracy
	delta-HCH		Poor Accuracy
	Endrin		Poor Accuracy
Trace Elements	Cd		Poor Accuracy

Table 1.5a. Sediment toxicity, sediment quality, and trace element results from ambient sediment sampling (2004-2005).

Test Species: HYAL = *H. azteca*; EOHA = *E. estuarius*

Station Code	Month	Test Species	Toxic?	Mean % Survival [1]	% Fines (<63 um)	TOC	Ag	Al	As	Cd	Cu
						%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
			Average MDL ->				0.003	1	0.1	0.004	0.04
SUICRKUP	November	HYAL	no	72	55	1.0	0.24	56700	4.0	0.125	57
SUICRKLWR	November	EOHA	no	89	78	1.9					
PETRIVUP	November	HYAL	no	97	47	1.9	0.29	40923	2.9	0.21	34
PETRIVLWR	November	EOHA	no	89	98	2.0					
NAPRIVUP	November	HYAL	no	86	37	0.9	0.38	36175	5.4	0.185	33
NAPRIVLWR	November	EOHA	no	91	77	1.7					
SUICRKUP	April	HYAL	no	100	30	0.6	0.28	53838	9.5		52
SUICRKLWR	April	EOHA	no	84	68	1.8					
PETRIVUP	April	HYAL	no	93	44	2.4	0.30	58157	4.6		39
PETRIVLWR	April	EOHA	no	85	100	2.1					
NAPRIVUP	April	HYAL	no	99	44	1.3	0.62	66820	7.0		51
NAPRIVLWR	April	EOHA	no	98	86	3.1					
SANMATCRKUP	November	HYAL	Yes	19	42	2.0	0.28	42260	2.8	0.261	41
SANMATCRKLWR	November	EOHA	Yes	39	97	2.7	0.70	54560	7.3	0.394	34
SANLORCRKUP	November	HYAL	Yes	57	18	0.5	0.17	44636	2.5	0.166	20
SANLORCRKLWR	November	EOHA	no	93	46	1.6					
COYCRKUP	November	HYAL	no	85	32	0.7	0.19	46027	3.1	0.324	27
COYCRKLWR	November	EOHA	no	86	41	1.1					
SANMATCRKUP	April	HYAL	Yes	5	69	3.3	0.39	64422	6.0		67
SANMATCRKLWR	April	EOHA	Yes	33	99	2.5	0.68	89128	10.9		78
SANLORCRKUP	April	HYAL	no	100	35	3.0	0.35	41584	4.7		34
SANLORCRKLWR	April	EOHA	no	81	35	0.5					
COYCRKUP	April	HYAL	Yes	79	24	1.0	0.24	49860	5.2		29
COYCRKLWR	April	EOHA	no	86	67	1.7					
			Minimum	**5**	**18**	**0.5**	**0.17**	**36175**	**2.5**	**0.125**	**20**
			Maximum	**100**	**100**	**3.3**	**0.70**	**89128**	**10.9**	**0.394**	**78**
			Average both periods	**77**	**57**	**1.7**	**0.36**	**53221**	**5.4**	**0.238**	**43**
			Average North Bay Tribs	**90**	**64**	**1.7**	**0.35**	**52102**	**5.6**	**0.173**	**44**
			Average South Bay Tribs	**64**	**50**	**1.7**	**0.37**	**54060**	**5.3**	**0.286**	**41**
			RMP North Bay Average		71	1	0.14	31825	8.8	0.307	46
			RMP South Bay Average		85	1.2	0.26	42464	7.5	0.242	39

[1] % survival results normalized to the associated control samples.

Table 1.5a (continued). Sediment toxicity, sediment quality, and trace element results from ambient sediment sampling (2004-2005).

Station Code	Month	% Fines (<63 um)	TOC	Fe	Hg	MeHg	Mn	Ni	Pb	Se	Zn
			%	mg/kg	mg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Average MDL ->				143	0.0001	0.03	0.1	0.04	0.1	0.002	0.08
SUICRKUP	November	55	1.0	30253	0.06	0.18	1134	33	19	0.17	90
SUICRKLWR	November	78	1.9		0.20	2.19					
PETRIVUP	November	47	1.9	32695	0.30	1.18	686	64	37	0.12	112
PETRIVLWR	November	98	2.0		0.70	0.15					
NAPRIVUP	November	37	0.9	23158	0.70	0.21	845	55	63	0.09	123
NAPRIVLWR	November	77	1.7		0.35	0.68					
SUICRKUP	April	30	0.6	38891	0.04	0.34	837	61	21	0.17	110
SUICRKLWR	April	68	1.8		0.14	0.81					
PETRIVUP	April	44	2.4	33797	0.30	1.54	1115	69	34	0.07	134
PETRIVLWR	April	100	2.1		0.33	0.09					
NAPRIVUP	April	44	1.3	39306	1.53	0.45	816	98	87	0.11	157
NAPRIVLWR	April	86	3.1		0.28	3.1					
SANMATCRKUP	November	42	2.0	21238	0.14	1.35	567	125	48	0.06	146
SANMATCRKLWR	November	97	2.7	32695	0.25	2.41	778	124	59	0.38	198
SANLORCRKUP	November	18	0.5	9313	0.05	0.05	364	9	19	0.68	63
SANLORCRKLWR	November	46	1.6		0.08						
COYCRKUP	November	32	0.7	22168	0.11	0.05	523	83	23	0.35	123
COYCRKLWR	November	41	1.1		0.13	0.83					
SANMATCRKUP	April	69	3.3	36328	0.15	5.31	843	197	53	0.06	228
SANMATCRKLWR	April	99	2.5	60315	0.28	5.15	749	150	49	0.11	215
SANLORCRKUP	April	35	3.0	18902	0.05	0.3	647	33	43	0.16	184
SANLORCRKLWR	April	35	0.5		0.03	0.49					
COYCRKUP	April	24	1.0	25259	0.07	0.77	532	87	19	0.13	117
COYCRKLWR	April	67	1.7		0.17	0.72					
Minimum		**18**	**0.5**	**9313**	**0.03**	**0.05**	**364**	**9**	**19**	**0.06**	**63**
Maximum		**100**	**3.3**	**60315**	**1.53**	**5.31**	**1134**	**197**	**87**	**0.68**	**228**
Average both periods		**57**	**1.7**	**30308**	**0.27**	**1.23**	**745**	**85**	**41**	**0.19**	**143**
Average North Bay Tribs		**64**	**1.7**	**33016**	**0.41**	**0.91**	**906**	**63**	**43**	**0.12**	**121**
Average South Bay Tribs		**50**	**1.7**	**28277**	**0.13**	**1.58**	**625**	**101**	**39**	**0.242**	**159**
RMP North Bay Average		71	1	40061	0.18	0.26	673	86	17	0.206	116
RMP South Bay Average		85	1.2	36104	0.22	0.84	848	81	22	0.318	124

Table 1.5b. Sediment trace organic contaminant results from ambient sediment sampling (2004-2005).

Station Code	Month	% Fines (<63 um)	TOC	Sum of PAHs (SFEI)	Sum of PCBs (SFEI)	Sum of DDTs (SFEI)	Sum of PBDEs (SFEI)	Sum of Pyrethroids (SFEI)	Bifenthrin	Cyfluthrin	Cypermethrin	Permethrin
			%	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
	Average MDL ->			2	2	0.2	0.7	1.8	1	2	2	3
SUICRKUP	November	55	1.0	67	1	7	ND	6.8	3.6	ND	ND	3.2
SUICRKLWR	November	78	1.9									
PETRIVUP	November	47	1.9	601	7	4	1.9	6.7	6.7	ND	ND	ND
PETRIVLWR	November	98	2.0									
NAPRIVUP	November	37	0.9	240	3	12	ND	2	2	ND	ND	ND
NAPRIVLWR	November	77	1.7									
SUICRKUP	April	30	0.6	43	1	8	0	ND	ND	ND	ND	ND
SUICRKLWR	April	68	1.8	237	2	6	9.6	ND	ND	ND	ND	ND
PETRIVUP	April	44	2.4	534	2	2	2.1	ND	ND	ND	ND	ND
PETRIVLWR	April	100	2.1	1148	4	4	1.6	ND	ND	ND	ND	ND
NAPRIVUP	April	44	1.3	233	2	7	0	ND	ND	ND	ND	ND
NAPRIVLWR	April	86	3.1	442	4	9	2.8	1.1	1.1	ND	ND	ND
SANMATCRKUP	November	42	2.0	3035	35	64	7.9	43.6	10.3	8.6	4.2	20.5
SANMATCRKLWR	November	97	2.7	1643	11	13	7.9	10	6.7	ND	ND	3.2
SANLORCRKUP	November	18	0.5	1104	8	9	2.1	8.2	4.4	ND	ND	3.8
SANLORCRKLWR	November	46	1.6									
COYCRKUP	November	32	0.7	541	9	15	5.7	1.9	1.9	ND	ND	ND
COYCRKLWR	November	41	1.1									
SANMATCRKUP	April	69	3.3	1604	34	37	11.7	ND	ND	ND	ND	ND
SANMATCRKLWR	April	99	2.5	1550	19	16	10.1	2.4	2.4	ND	ND	ND
SANLORCRKUP	April	35	3.0	3015	16	26	23.0	2.1	2.1	ND	ND	ND
SANLORCRKLWR	April	35	0.5	804	4	5	2.2	ND	ND	ND	ND	ND
COYCRKUP	April	24	1.0	267	11	11	5.3	0.7	0.9	ND	ND	ND
COYCRKLWR	April	67	1.7	686	23	16	8.0	2	2	ND	ND	ND
	Minimum	**18**	**0.5**	**43**	**1**	**2**	**0.4**	**0.7**	**0.9**	**8.6**	**4.2**	**3.2**
	Maximum	**100**	**3.3**	**3035**	**35**	**64**	**23.0**	**43.6**	**10.3**	**8.6**	**4.2**	**20.5**
Average both periods		**57**	**1.7**	**937**	**10**	**14**	**6.0**	**7.3**	**3.7**	**8.6**	**4.2**	**7.7**
Average North Bay Tribs		**64**	**1.7**	**394**	**3**	**7**	**2.7**	**4.2**	**3.4**	**ND**	**ND**	**3.2**
Average South Bay Tribs		**50**	**1.7**	**1425**	**17**	**21**	**8.4**	**8.9**	**3.8**	**8.6**	**4.2**	**9.2**
RMP North Bay Average		71	1	677	3	2	na	na	na	na	na	na
RMP South Bay Average		85	1.2	1552	6	2	na	na	na	na	na	na

Table 1.6. History of sediment and interstitial water initial test toxicity at San Mateo Creek Upper (SANMATCRKUP).

Collection Date	Test Date	Survival (%)	SD (%)	Notes
11/4/2004	11/12/2004	19	24	Original EPTox Sample
4/18/2005	4/29/2005	4	5	Original EPTox Sample
5/18/2005	7/1/2005	18	11	Initial Sediment
5/18/2005	7/1/2005	47	31	Initial Interstitial Water
5/18/2005	8/2/2005	87	12	Initial Elutriate

Table 1.7. History of sediment and interstitial water initial test toxicity at Lower San Mateo Creek (SANMATCRKLWR).

* indicates significant toxicity.

Collection Date	Test Date	Survival (%)	SD (%)	Notes
11/4/2004	11/12/2004	37*	14	Original Prism Sample
4/18/2005	4/29/2005	33*	12	Original EPTox Sample
5/18/2005	7/1/2005	68	33	Initial Sediment for TIE1
5/18/2005	7/1/2005	100	0	Initial Interstitial Water 1
5/18/2005	7/22/2005	96	9	Initial Sieved Sediment 1
9/6/2005	9/23/2005	68	30	Initial Sediment 2
12/28/2005	1/6/2006	96	9	Initial Sediment 3
5/19/2006	5/26/2006	56*	33	Initial Sediment 4
5/19/2006	6/16/2006	80	23	TIE Baseline

Table 1.8. Mean percent survival and standard deviation (SD) of *H. azteca* in solid-phase SANMATCRKUP TIE 1.

	Solid-Phase Treatments		Acetone Eluate Treatments	
23ºC Treatments	Mean	SD	Mean	SD
Baseline SANMATCRKUP	16	21		
SANMATCRKUP (10% SIR-	0	0		
Control (10% SIR-300)	96	5		
SANMATCRKUP (10%	42	8	0	0
Control (10% Ambersorb)	98	4	93	12
SANMATCRKUP (20%	0	0		
Control (20% Amendments)	100	0		
SANMATCRKUP (20% Control)	40	23		
SANMATCRKUP (10% Control)	22	15		
SANMATCRKUP (Enzyme)	60	29		
Control (Enzyme)	98	4		
SANMATCRKUP (PBO)	0	0		
Control (PBO)	98	4		
Control	100	0	100	0
15ºC Treatments				
Baseline SANMATCRKUP	0	0		
SANMATCRKUP (Enzyme)	10	12		
Control (Enzyme)	94	9		
Control	98	4		

Table 1.9. Mean percent survival and standard deviation (SD) of *H. azteca* in solid-phase SANMATCRKUP TIE 2.

	Solid-Phase Treatments	
Treatments	Mean	SD
Baseline SANMATCRKUP	24	21
SANMATCRKUP (Enzyme)	72	27
Control (Enzyme)	100	0
SANMATCRKUP (BSA)	60	23
Control (BSA)	96	9
Control	100	0

Table 1.10. Mean percent survival and standard deviation (SD) of *H. azteca* in solid-phase SANMATCRKUP TIE 3.

	Solid-Phase Treatments		Acetone Eluate Treatments	
Treatments	Mean	SD	Mean	SD
Baseline SANMATCRKUP	2	4		
SANMATCRKUP (10%	28	13	0	0
SANMATCRKUP (15%	10	10		
SANMATCRKUP (20%	52	16	0	0
Control (20% Ambersorb)	96	5	70	23
SANMATCRKUP (20% Control)	50	19		
Control	98	4	100	0

Table 1.11. Concentrations of detected pesticides in SANMATCRKUP sediment. ND indicates not detected. NA indicates not analyzed. LC50 values are for *H. azteca*.

Chemical	SANMATCRK UP Sediment ng/g dry wt.	Sediment LC50 ng/g dry wt.	Ambersorb Eluate ng/L	Water LC50 ng/L
Cyfluthrin	2.64	13.7 [a]	112	12 [a, b]
Cyfluthrin µg/g oc	0.081	1.08 [a]		
Cypermethrin	1.75	18.0 [f]	ND	5.3 [b]
Total Chlordane	ND		285	
DDD (p,p’)	14.6	28 PEC	479	190 [c]
DDE (p,p’)	62.4	31.3 PEC	480	1660 [c]
DDT (p,p’)	41.6	62.9 PEC	292	70 [c]
Total DDT	118.6	572 PEC		
Total DDT µg/g oc	3.65	371 [d]		
Dieldrin	ND		381	
Arsenic	6.53	33 PEC	NA	
Cadmium	0.41	4.98 PEC	NA	
Chromium	168	111 PEC	NA	
Copper	54.2	260 [e]	NA	
Lead	42.1	128 PEC	NA	
Nickel	150	48.6 PEC	NA	
Zinc	200	459 PEC	NA	
Total Organic Carbon	3.25%			

[a] Amweg *et al.* (2005), [b] Solomon *et al.* (2001), [c] Hoke *et al.* (1994), [d] Nebeker *et al.* (1989), [e] MPSL Unpublished Data. [f] Maund *et al.* 2002. PEC indicates probable effects concentration (MacDonald *et al.* 2001).

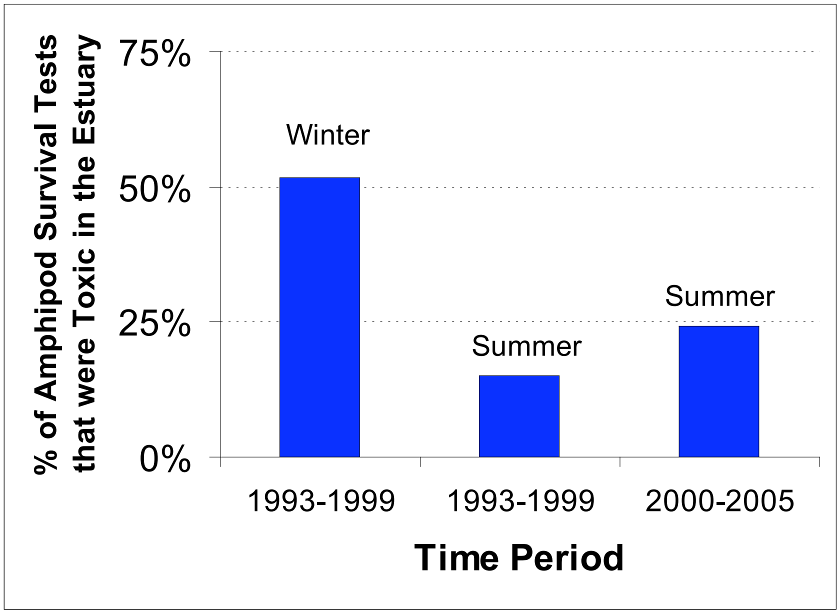


Figure 1.1. Percentage of sediment toxicity tests that were toxic to amphipods in the RMP Status and Trends Program (1993-2005).

Sediment samples were toxic to amphipods in the winter than in the summer between 1993 and 1999. Since 2000 the RMP only sampled the Estuary for sediment toxicity during the summer so a season comparison could not be evaluated.

North Bay Tributaries

Petaluma River
Upper (PETRIVUP) and
Lower (PETRIVLWR)
Stations

Napa River
Upper (NAPRIVUP) and
Lower (NAPRIVLWR)
Stations

Suisun Creek
Upper (SUICRKUP) and
Lower (SUICRKLWR)
Stations

South Bay Tributaries

San Mateo Creek
Upper (SANMATUP) and
Lower (SANMATLWR)
Stations

San Lorenzo Creek
Upper (SANLORCRKUP) an
Lower (SANLORCRKLWR)
Stations

Coyote Creek
Upper (COYCRKUP) and
Lower (COYCRKLWR)
Stations

Figure 1.2 Station Location map for the field study component of this PRISM grant.

Six tributaries were sampled at two locations each in November 2004 and April 2005. The “Upper” stations were located in the lower freshwater reaches of each tributary, while the “Lower” stations were located within the tidal prism of each tributary. Photos from the sampling events are presented in Appendix A, and Table 1.2 provides additional station and sampling information including: latitude/longitude, cross streets, dates sampled, and stream gauge information about each sampling event.

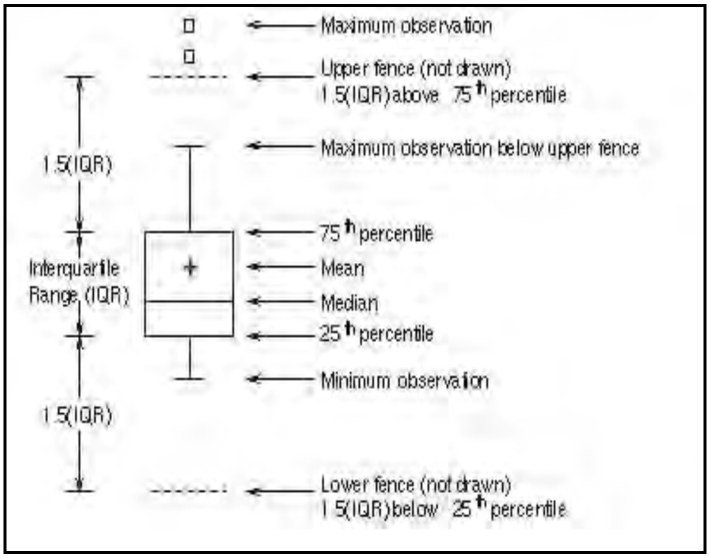


Figure 1.3. Illustration of a schematic box plot and its statistical components.

Sediment Toxicity

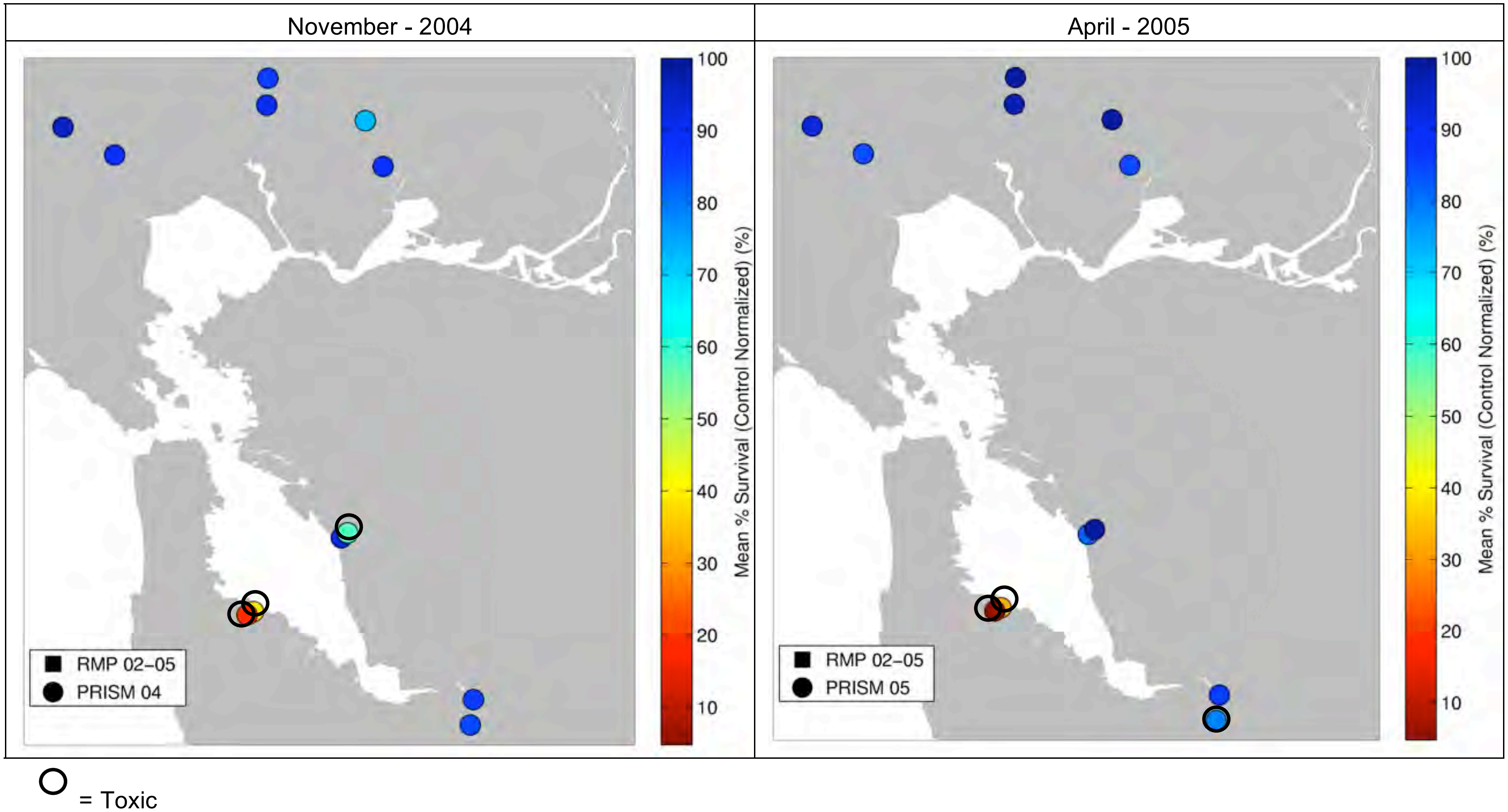


Figure 1.4. Amphipod sediment toxicity results in the tirbutaries (2004-2005).

10-day amphipod sediment toxicity results for both sampling periods at the "Upper" freshwater stations (test species was *H. azteca*), and the "Lower" estuarine stations (test species was *E. estuarius*). The mean% survival results shown here were normalized to the mean control% survival. San Mateo Creek showed sediment toxicity to amphipods at both the Upper and Lower stations sampled in both November and April (19%, 39%; 5%, 33% survival respectively). The San Lorenzo Creek Upper station sediment was toxic in November (57% survival) and the Coyote Creek Upper station was toxic in April (79% survival).

Percent Fines (< 63 µm)

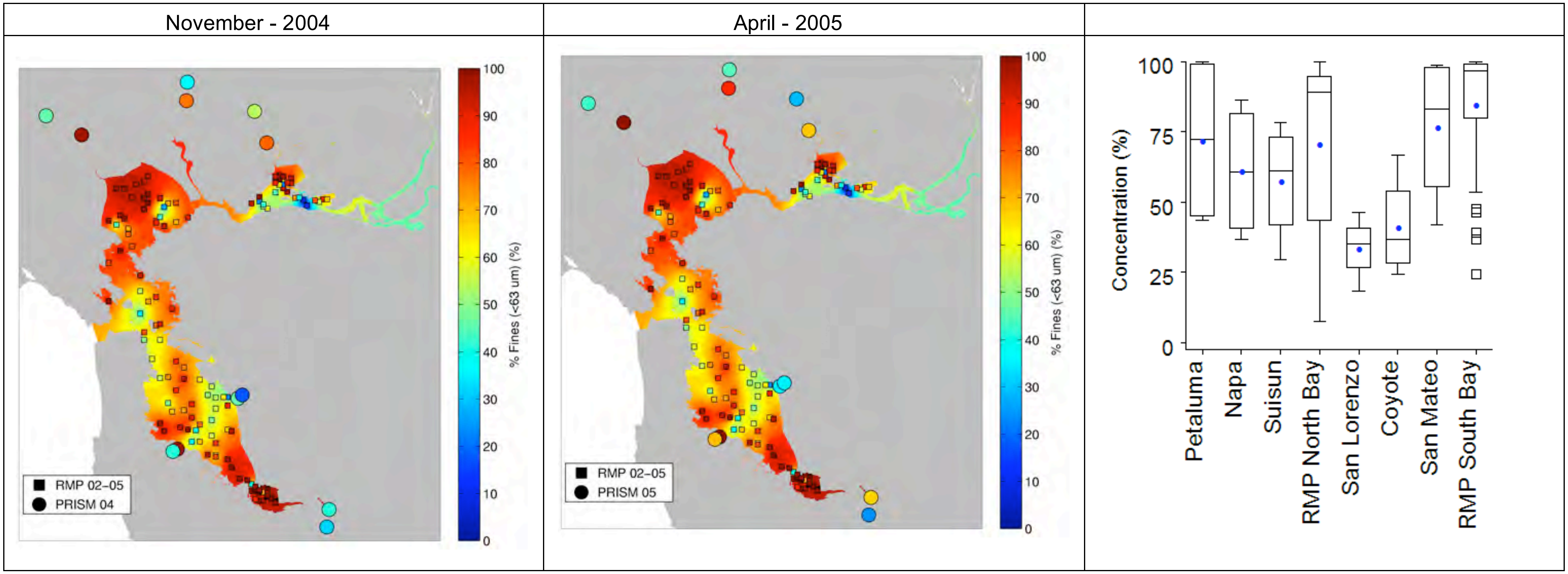


Figure 1.5. Percent Fines measured in the tributaries and in the RMP (2004-2005).

Percent fine-grained sediments (< 63 micron diameter) were measured in all samples during both sampling periods. % Fines concentrations varied widely in samples from each tributary with eleven samples having more than 50% Fines, six samples having 40 to 50% Fines, five samples having 30 to 40% Fines, and two samples having less than 30% Fines. The North Bay tributary average was 64% and the South Bay tributary average was 51%. The San Lorenzo and Coyote Creek stations had low levels of fine-grained sediments (ranging from 18 to 35% and 24 to 67% respectively).

Total Organic Carbon (TOC)

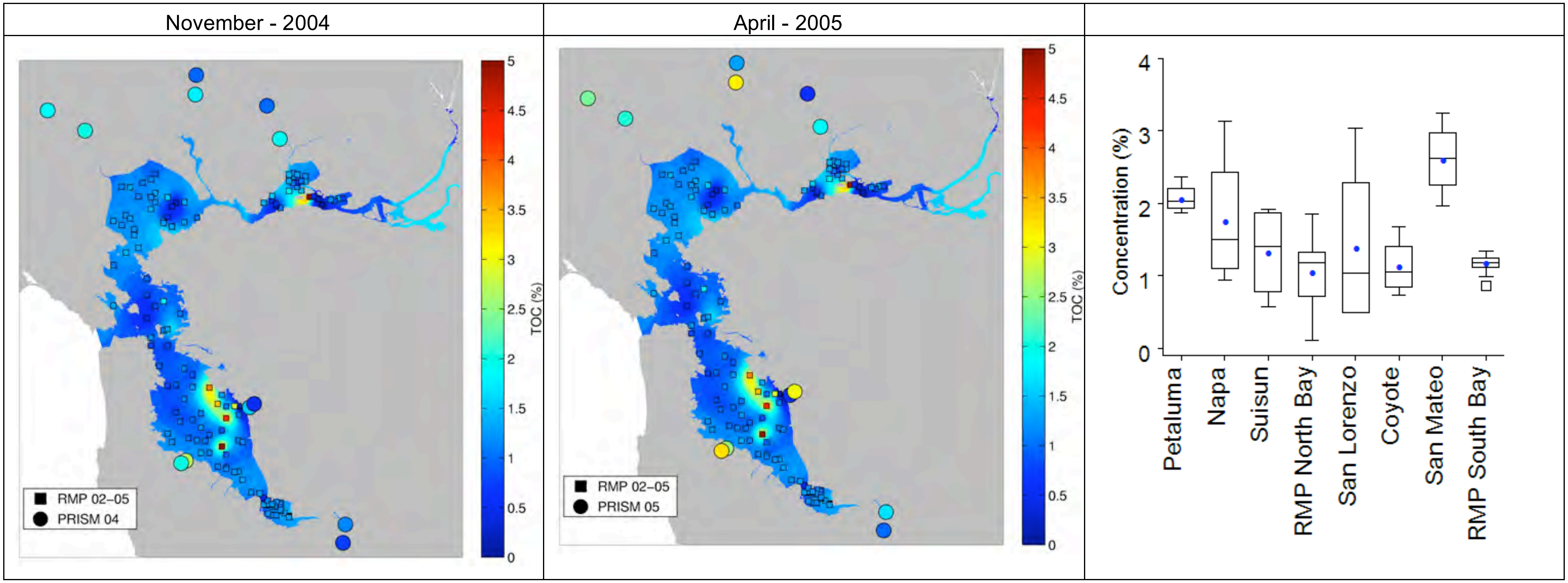


Figure 1.6. Total Organic Carbon measured in the tributaries and in the RMP (2004-2005).

Total Organic Carbon was measured at all stations during both sampling periods. All of the samples showed similar ranges of TOC concentrations as those observed in the RMP North Bay and South Bay samples (2002 – 2005) with the exception of San Mateo Creek. San Mateo Creek samples had significantly higher TOC concentrations (2.0 to 3.3%) than the RMP South Bay samples (2004-2005; average of 1.2%) and Coyote Creek (0.7 – 1.7%), but were not significantly different from concentrations observed in San Lorenzo Creek where the variance was wider (0.5 – 3.0%).

Sum of PAHs

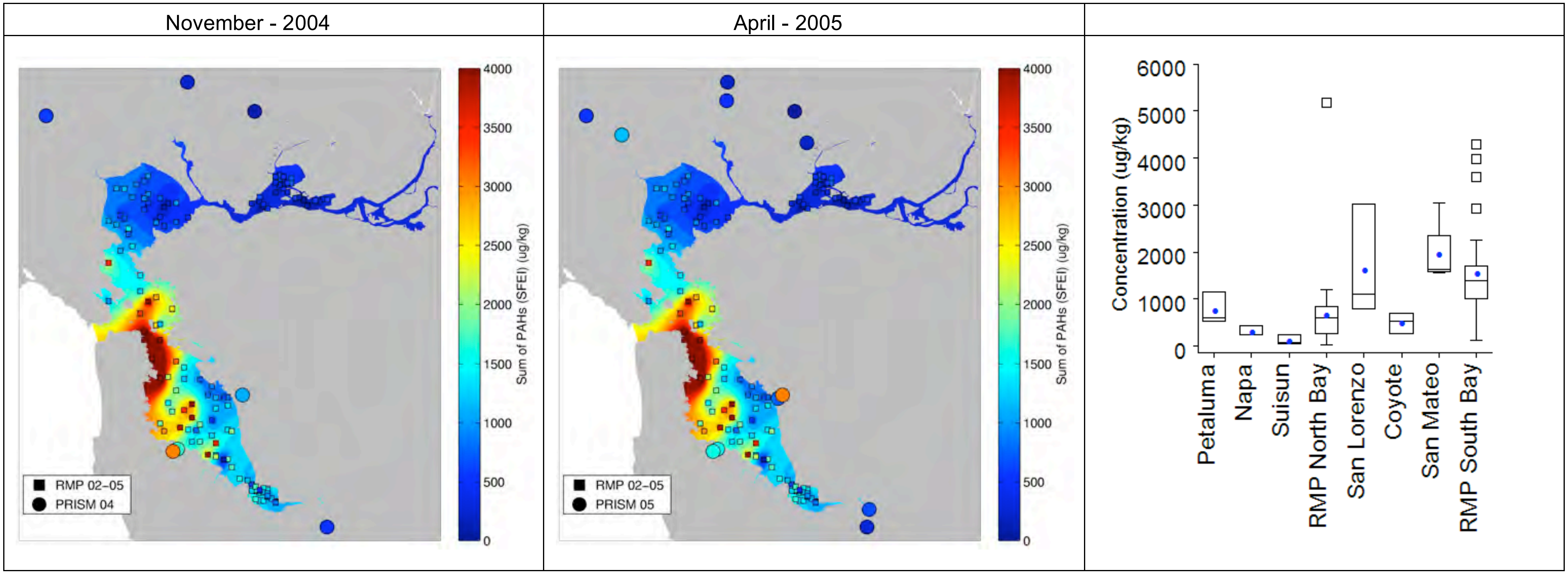


Figure 1.7. Sum of PAHs measured in the tributaries and in the RMP (2004-2005).

Sum of PAHs were detected in all samples from the tributaries and were within similar ranges of concentrations observed in the RMP Status and Trends program in the Northern and Southern Estuary (sampled 2004-2005). Concentrations in the in the three North Bay tributaries were, on average, three times lower than the three South Bay tributaries. San Mateo Creek Upper station had the highest concentration in November (3035 µg/kg), which was almost two times higher than the concentration observed in the San Mateo Creek Lower sample during the same sampling period (1643 µg/kg). The San Lorenzo Creek Upper sample from April was the highest spring concentration (3015 µg/kg), and was close to four times higher than the San Lorenzo Creek Lower sample during the same sampling period (804 µg/kg).

Sum of PCBs

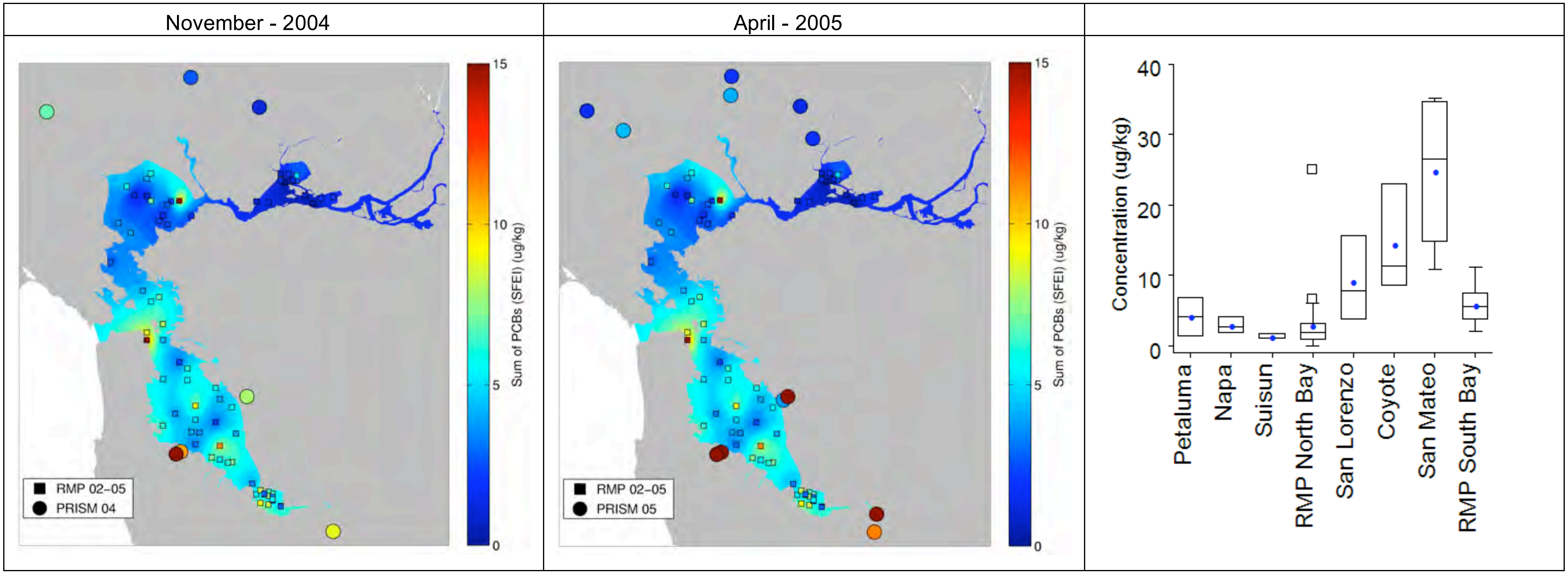


Figure 1.8. Sum of PCBs measured in the tributaries and in the RMP (2004-2005).

Sum of PCBs were detected in all samples from the tributaries and were higher concentrations than those observed in the RMP Status and Trends program in the North and South Bay (sampled 2004-2005). On average, concentrations in the in the three North Bay tributaries were five times lower than the three South Bay tributaries (3 and 17 µg/kg respectively – see Table 1.5b). The three South Bay tributaries had concentrations that were above the scale of these maps: The San Mateo Creek Upper station had the highest concentrations in November and April (35 and 34 µg/kg respectively). The Coyote Creek Lower station had the next highest concentration in April (23 µg/kg), then the San Mateo Creek Lower station in April (19 µg/kg), and San Lorenzo Creek Upper station in April 16 µg/kg). With the exception of the Petaluma River Upper station sample in November (7µg/kg), the North Bay tributaries samples had Sum of PCB concentrations of less than 4 µg/kg.

Sum of DDTs

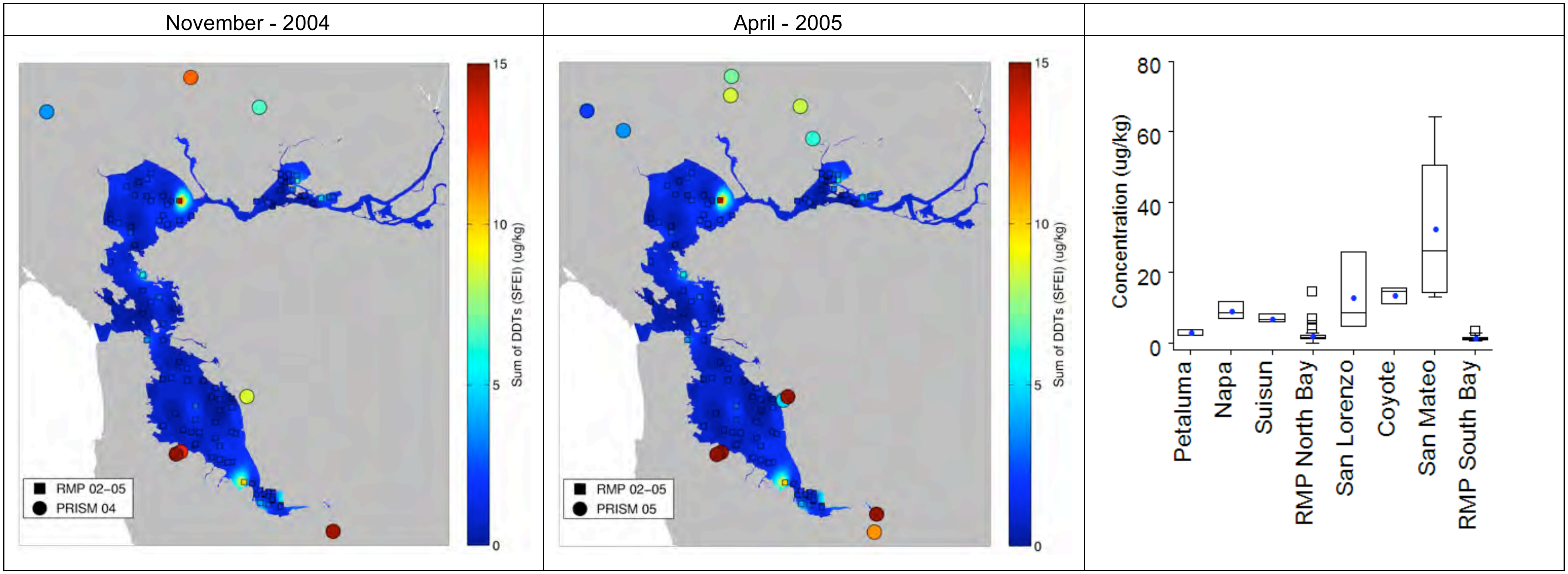


Figure 1.9. Sum of DDTs measured in the tributaries and in the RMP (2004-2005).

Sum of DDTs were detected in all samples from the tributaries and were higher concentrations than those observed in the RMP Status and Trends program in the North and South Bay regions (sampled 2004-2005). On average, concentrations in the in the three North Bay tributaries were three times higher than the average RMP North Bay concentration (7 and 2.2 µg/kg respectively). Average sum of DDT concentrations in the South Bay tributaries were fourteen times the average RMP South Bay concentration (21 and 1.5 µg/kg respectively). With the exception of the Napa River Upper station, in November (12 µg/kg), the North Bay tributary samples ranged from 2 to 4 µg/kg, while the South Bay tributary samples had a much broader range of 4 to 64 µg/kg. Several of the South Bay tributaries had Sum of DDT concentrations that were well above the scale of these maps. The San Mateo Creek Upper station had the highest concentrations of all samples in November and April (64 and 37 µg/kg respectively). The San Lorenzo Creek Upper station had the next highest concentration in April (26 µg/kg), then the San Mateo Creek Upper station and the Coyote Creek Lower station in April each had concentrations of 16 µg/kg.

Sum of Pyrethroids

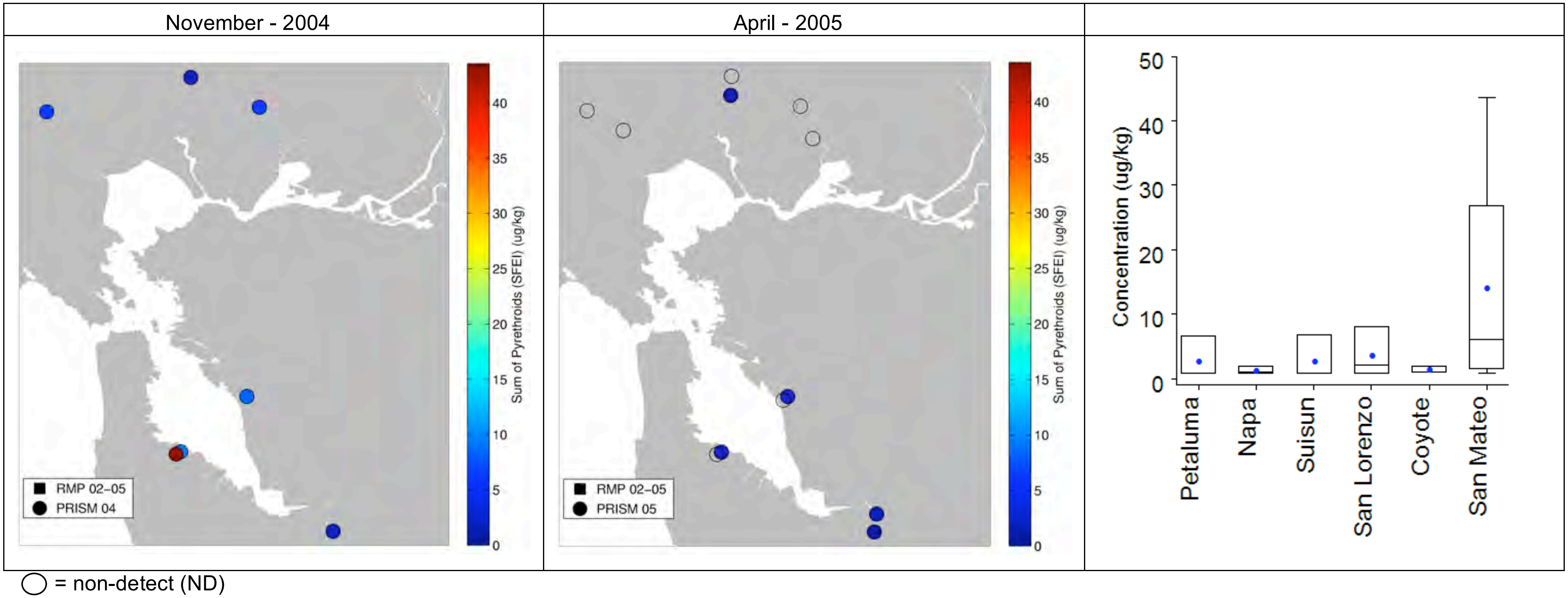
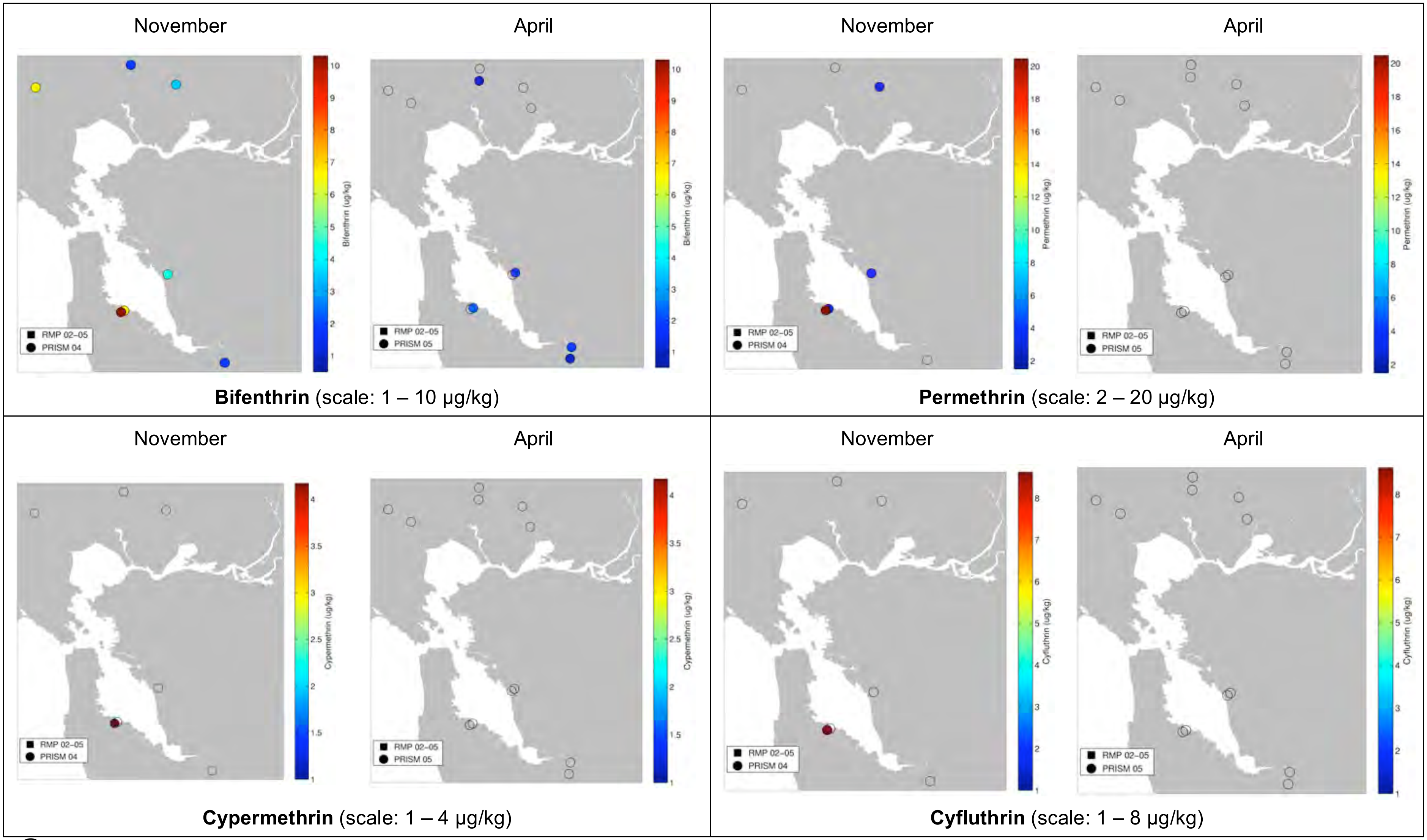


Figure 1.10. Sum of Pyrethroids measured in the tributaries (2004-2005).

Sum of Pyrethroids were detected in all samples from the November sampling period. No pyrethroids were measured in the RMP for comparison to in-Bay concentrations. The San Mateo Creek Upper station was the only location where 4 of the six pyrethroids analyzed were found above detection limits of 1-2 µg/kg. The San Mateo Creek Upper station had the highest concentrations of bifenthrin, and permethrin in November (10.3 and 20.5 µg/kg respectively). Cypermethrin and cyfluthrin were only found in the San Mateo Creek Upper station in November (4.2 and 8.6 µg/kg respectively). Bifenthrin was the only pyrethroid detected in all six tributaries at least once. Detected concentrations ranged from 1.1 to 6.7 µg/kg in the North Bay tributaries, and 1.0 to 10.3 µg/kg in the South Bay tributaries). Permethrin was detected in four samples from three tributaries in the November samples. This finding is consistent with other studies conducted in the region (Weston, 2006). Esfenvalerate and lambda-cyhalothrin were below detection in all samples.



○ = non-detect (ND)

Figure 1.11. Individual pyrethroid compounds measured in the tributaries (2004-2005).

Four of the six pyrethroids analyzed were found above detection limits of 1-2 µg/kg (esfenvalerate and lambda-cyhalothrin were below detection in all samples and are not presented here). The San Mateo Creek Upper station had the highest concentrations of bifenthrin, and permethrin in November (10.3 and 20.5 µg/kg respectively. Bifenthrin was the only pyrethroid detected in all six tributaries at least once. Detected concentrations ranged from 1.1 to 6.7 µg/kg in the North Bay tributaries, and 1.0 to 10.3 µg/kg in the South Bay tributaries). Permethrin was detected in four samples from three tributaries in the November samples.). Cypermethrin and cyfluthrin were only found in the San Mateo Creek Upper station in November (4.2 and 8.6 µg/kg respectively). These results are consistent with a UC-Berkeley study (Amweg *et al.* 2006) of pyrethroids and toxicity in East Bay tributaries during this same time period.

Sum of PBDEs

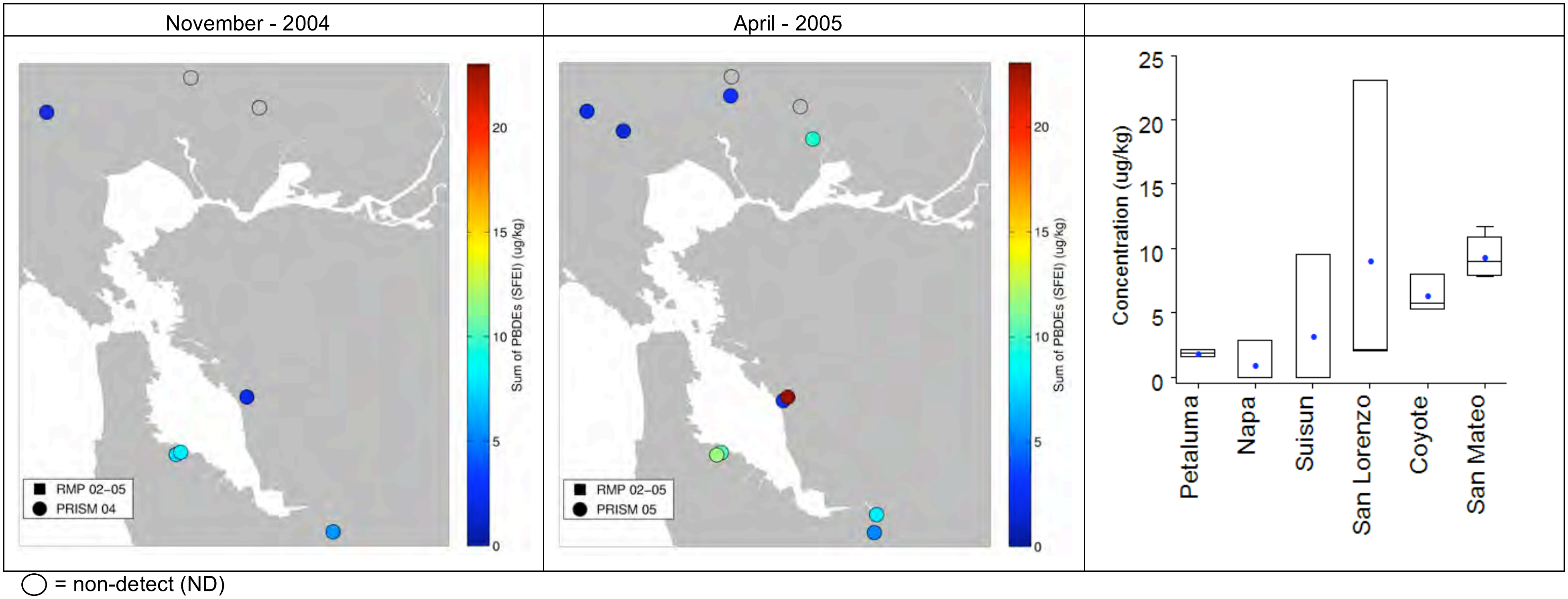


Figure 1.12. Sum of Polybrominated Diphenyl Ether (PBDE) measured in the tributaries (2004-2005).

BDE 47

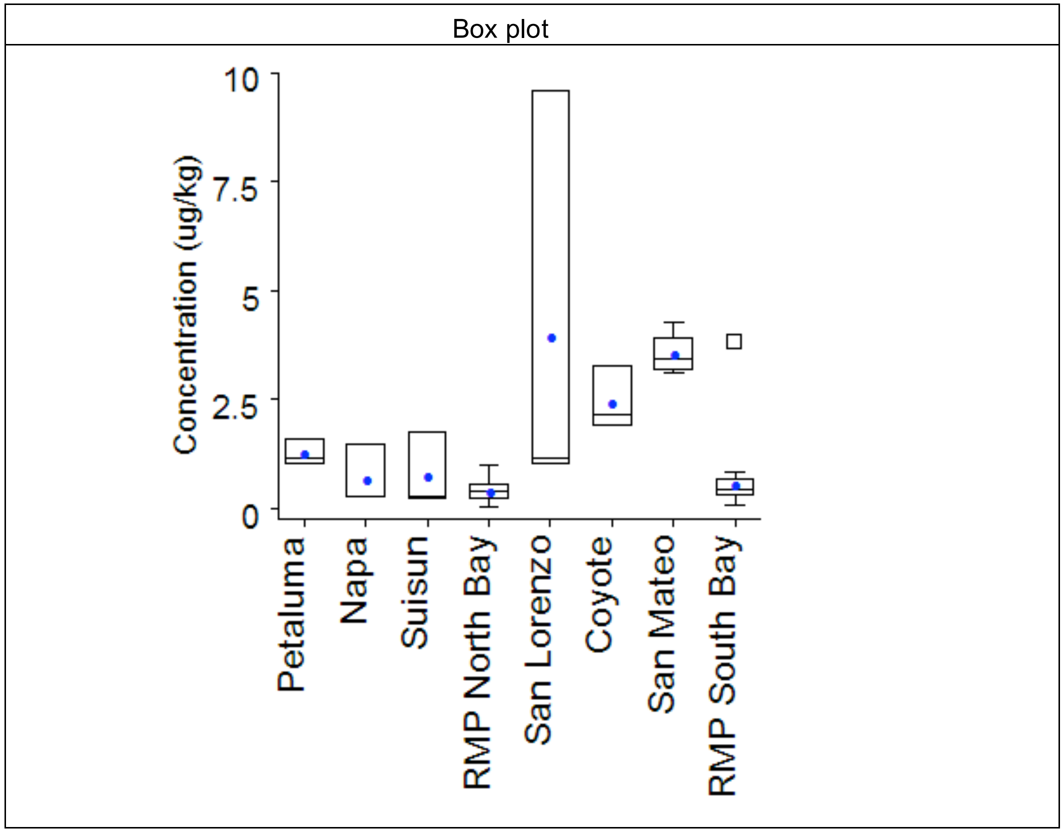


Figure 1.13. Box plot of the Polybrominated Diphenyl Ether 47 (BDE 47) measured in the tributaries and in the RMP (2004-2005).

In 2005 the RMP Status and Trends program only reported BDE 47 as a result of their QA/QC review. Therefore, only that compound was used in this comparison. BDE 47 concentrations observed in the individual tributaries (n= 3 or 4) compared to the RMP Status and Trends 2004-2005 results for the North and South Bays show that the South Bay tributary concentrations were significantly higher than the RMP South Bay concentrations (with the exception of one maximum observation in the RMP South Bay samples). North Bay tributary concentrations were similar to the RMP North Bay concentrations with the exception of Petaluma River, which was higher than the 75th percentile of the RMP North Bay samples.

Cadmium (Cd)

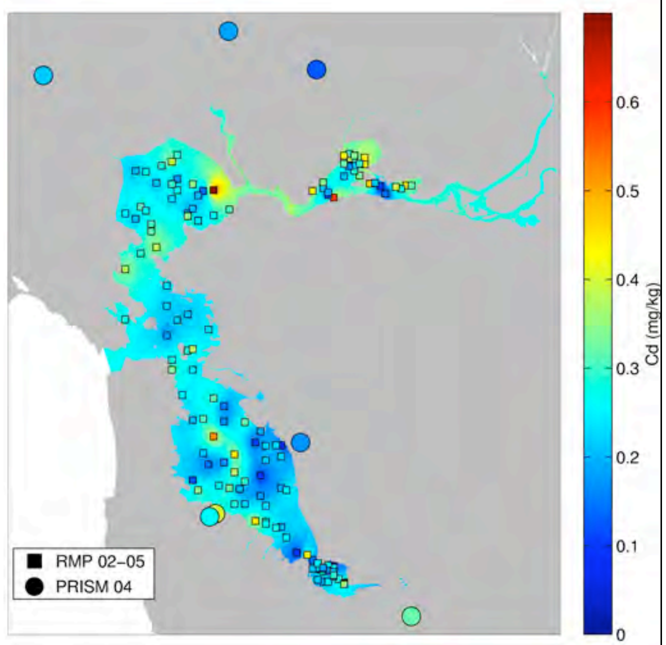
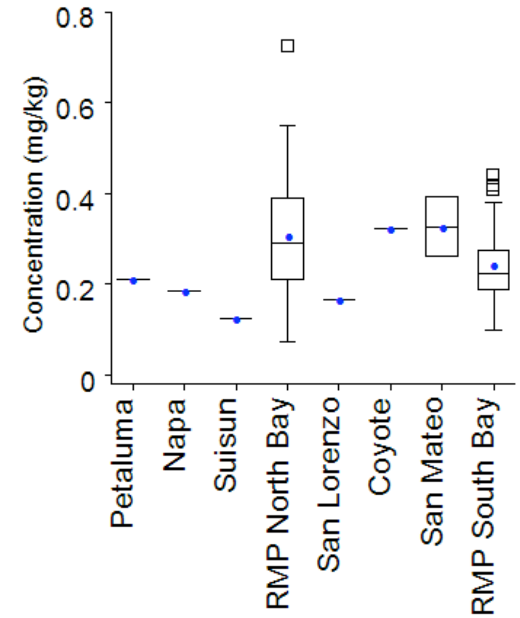
November - 2004	April – 2005	
	(not reported due to unacceptable QA/QC)	

Figure 1.14. Cadmium measured in the tributaries and in the RMP (2004-2005).

Cadmium (Cd) concentrations were detected in all samples from the November sampling period. No results are available for the April sampling period due to poor accuracy outside of acceptable data quality objectives. Note that the box plot represents only one sample from each tributary (except San Mateo Creek which includes the San Mateo Creek Lower station that was toxic to amphipods). The North Bay tributary samples fell within the 25th percentile of the RMP North Bay samples (2004-2005). The South Bay tributary samples were within a similar concentration range as the RMP South Bay samples (2004-2005).

Copper (Cu)

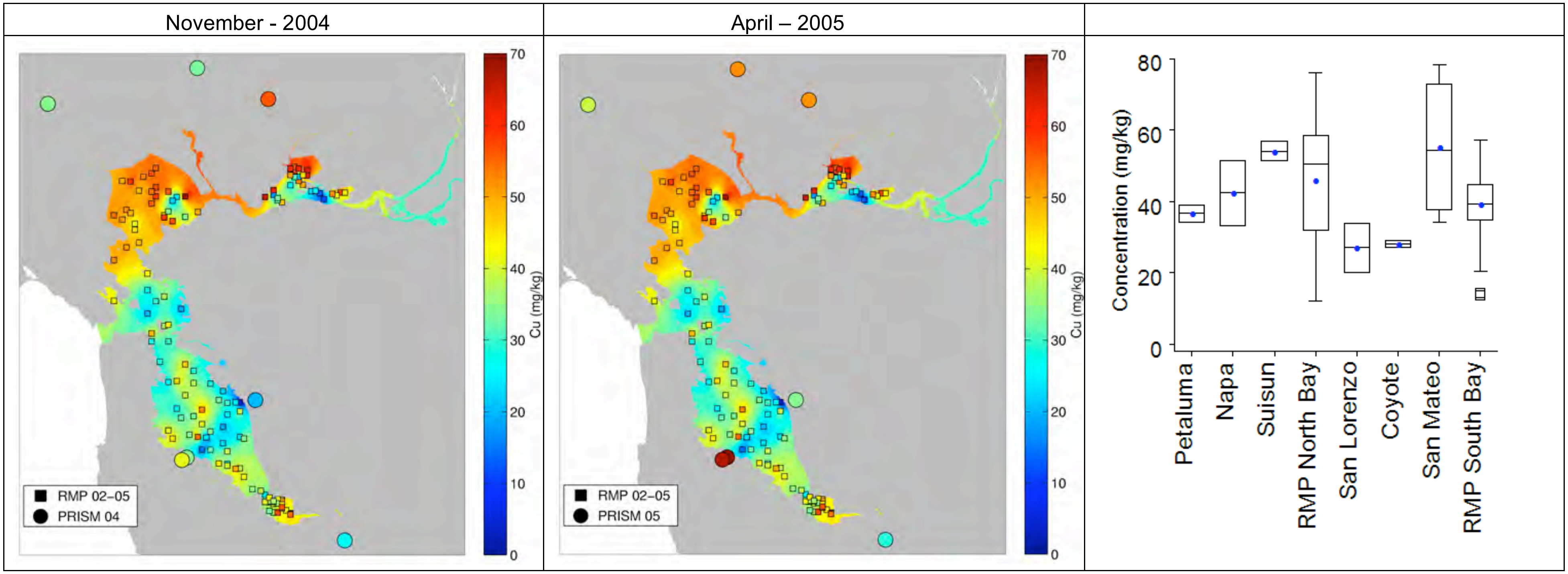


Figure 1.15. Copper measured in the tributaries and in the RMP (2004-2005).

Copper (Cu) concentrations were detected in all samples. North Bay tributary samples were within the range of the RMP North Bay samples (2004-2005). Similarly, the South Bay tributary samples were within the range of the RMP South Bay samples (2004-2005) with the exception that both the San Mateo Creek Upper and Lower stations had copper concentrations above the in-Bay range in April (67 and 78 µg/kg respectively).

Manganese (Mn)

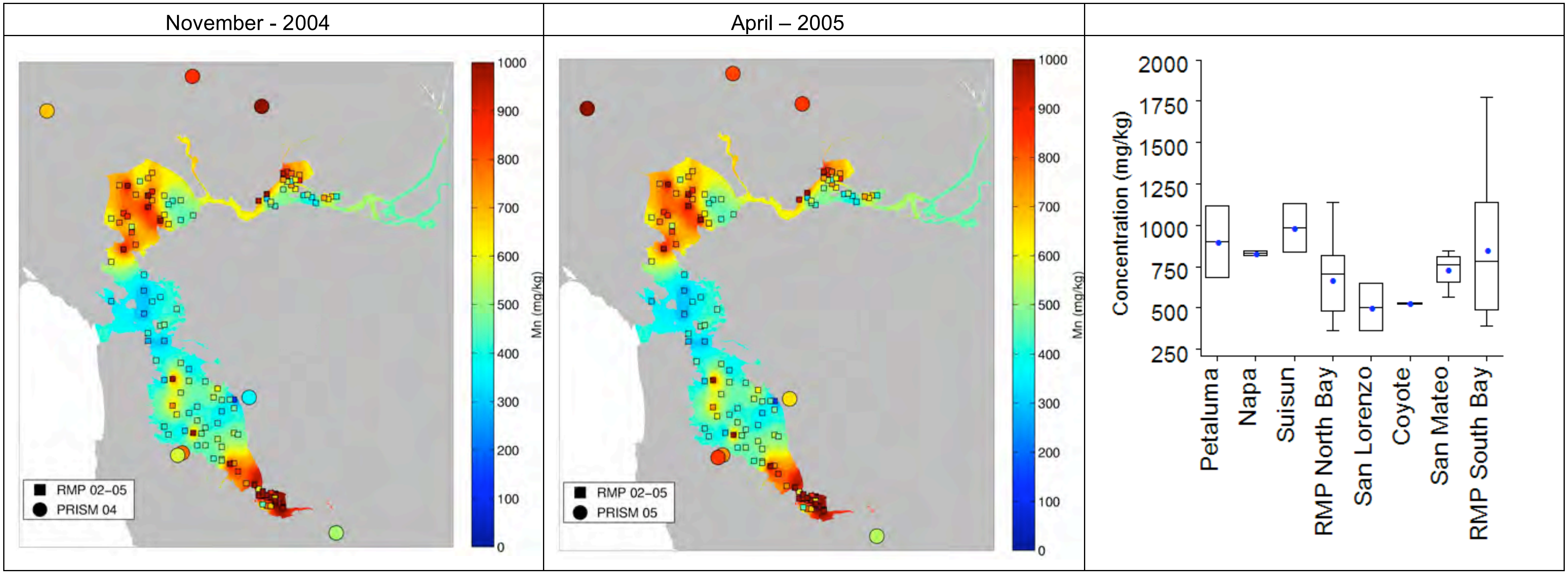


Figure 1.16. Manganese measured in the tributaries and in the RMP (2004-2005).

Manganese (Mn) concentrations were detected in all samples. Suisun Creek and Petaluma River had the highest concentrations and were slightly above the scale of these maps (1134 and 1115 µg/kg respectively). North Bay tributary samples were within the range of the RMP North Bay samples (2004-2005) and were generally above the median North Bay concentration. The South Bay tributary samples were within the range of the RMP South Bay samples (2004-2005) were generally below the median South Bay concentration.

Mercury (Hg)

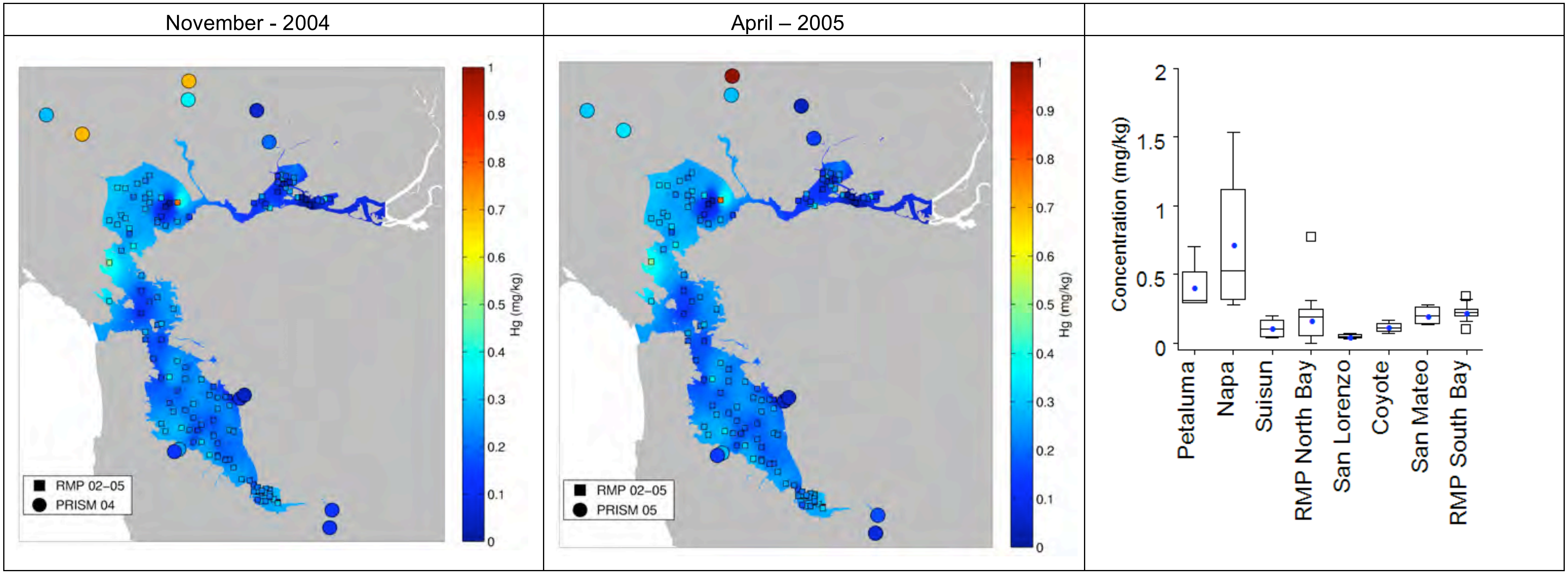


Figure 1.17. Mercury measured in the tributaries and in the RMP (2004-2005).

Total Mercury (Hg) concentrations were detected in all samples, and were analyzed in all the Lower stations for both sampling periods. The highest concentration was measured at the Napa River Upper station in April and was above the scale of these maps (1.53 mg/kg). This concentration was more than two times higher than the next highest value (0.70 mg/kg) observed in both the Napa and Petaluma Rivers in November. Average North Bay tributary mercury concentrations were two times higher than the average RMP North Bay results (2004-2005; 0.41 and 0.18 mg/kg respectively). Average South Bay tributary concentrations were similar to the average RMP South Bay results (2004-2005; 0.29 and 0.24 mg/kg respectively).

Methyl-mercury (MeHg)

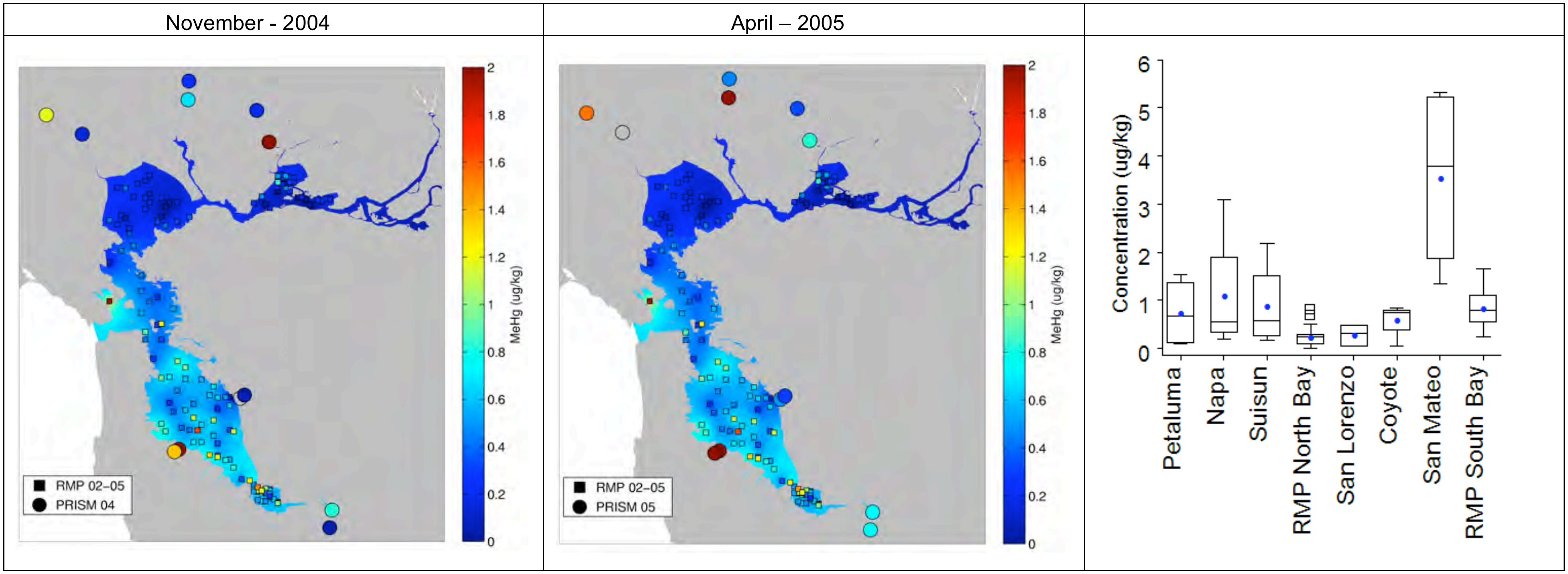


Figure 1.18. Methyl-mercury measured in the tributaries and in the RMP (2004-2005).

Methyl-mercury (MeHg) concentrations were detected in all samples except the Petaluma River Lower station (in April), and were analyzed in all the Lower stations for both sampling periods. Unlike the total mercury concentrations shown in the previous figure, the highest methyl-mercury concentrations were measured in the South Bay at the San Mateo Creek upper and Lower stations and were above the scale of these maps (5.31 and 5.15 µg/kg respectively). The Napa River Lower station (in April) had the next highest concentration (3.10 µg/kg) and the Suisun Creek Lower station had a concentration of 2.19 µg/kg in November). Average North Bay tributary methyl-mercury concentrations were three times higher than the RMP North Bay results (2004-2005; 0.91 and 0.26 µg/kg respectively – see Table 1.5). Average South Bay tributary concentrations were twice the average RMP South Bay results (2004-2005; 1.58 and 0.84 µg/kg respectively).

Nickel (Ni)

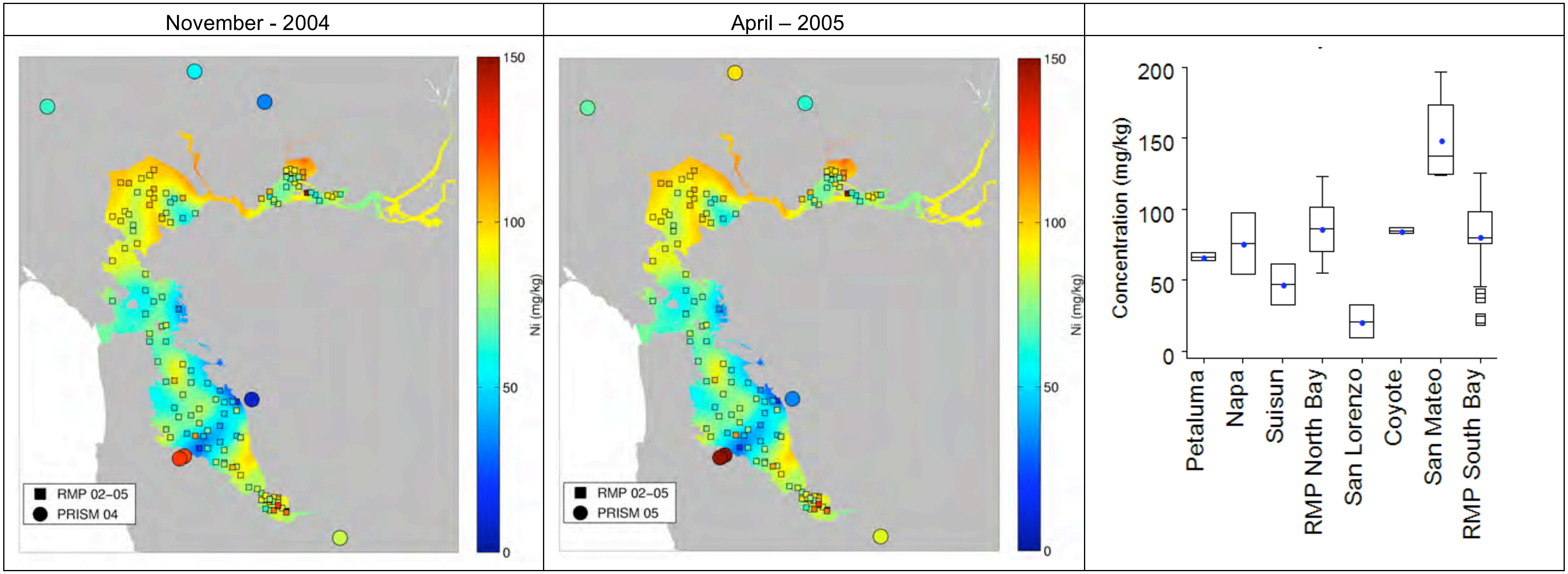


Figure 1.19. Nickel measured in the tributaries and in the RMP (2004-2005).

Nickel (Ni) concentrations were detected in all samples. North Bay tributary samples were generally within the range of the RMP North Bay samples (2004-2005) with the exception that the Suisun Creek concentrations falling below the RMP North Bay 25th percentile. The South Bay tributary samples varied widely with only Coyote Creek concentrations falling within the range of the RMP South Bay samples (2004-2005). San Lorenzo Creek concentrations were well below the in-Bay range, while San Mateo Creek concentrations fell well above the RMP South Bay 75th percentile (2004-2005). In fact San Mateo Creek had the highest nickel concentrations of all the tributaries with concentrations ranging from 124 to 197 mg/kg (the April-Upper sample was above the scale of the map at 197 mg/kg). By comparison, the other tributaries, combined, had sample concentrations ranging from 9 to 98 mg/kg.

Zinc (Zn)

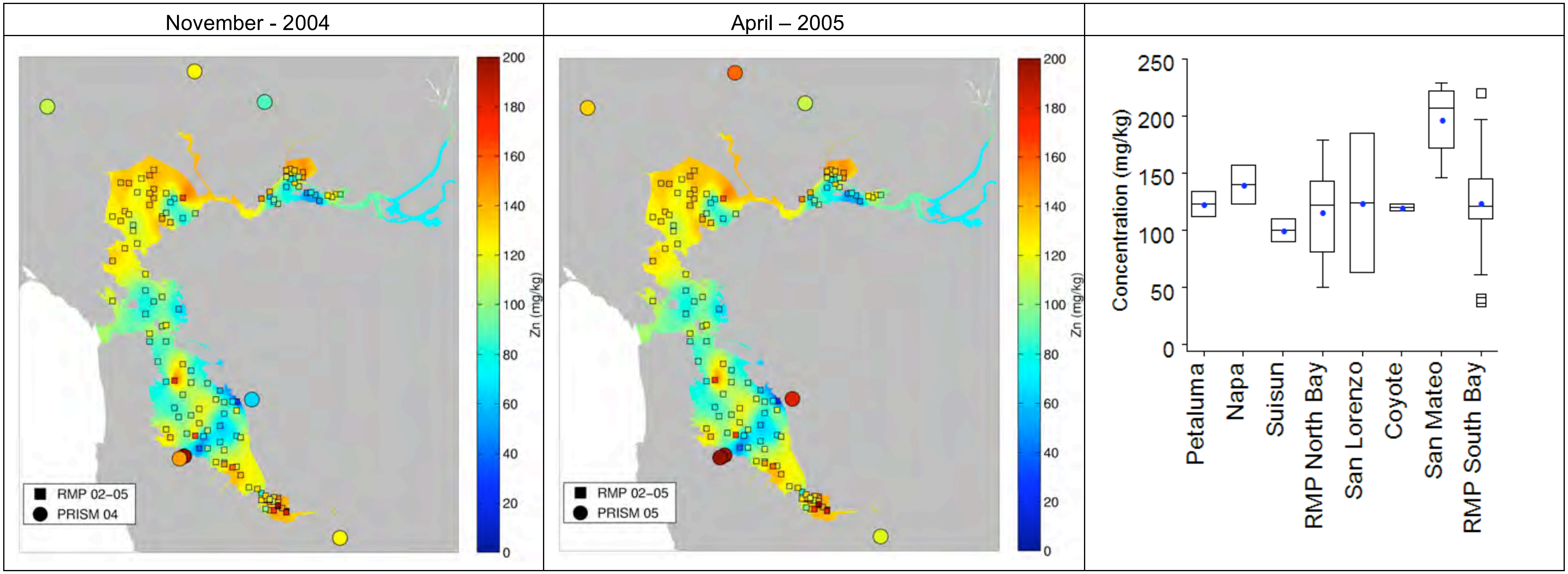


Figure 1.20. Zinc measured in the tributaries and in the RMP (2004-2005).

Zinc (Zn) concentrations were detected in all samples. North Bay tributary samples were within the range of the RMP North Bay samples (2004-2005). The South Bay tributary samples also fell within the range of the RMP South Bay samples (2004-2005). The San Mateo Creek concentrations were the highest of all the tributary samples and fell well above the RMP South Bay 75th percentile (2004-2005).

CHAPTER 2. RELATIVE SENSITIVITIES OF TOXICITY TEST PROTOCOLS WITH THE AMPHIPODS EOHAUSTORIUS ESTUARIUS AND AMPELISCA ABDITA TO SEDIMENT SPIKED WITH COPPER, CHLORPYRIFOS, FLUORANTHENE, BIFENTHRIN, CYPERMETHRIN, AND PERMETHRIN

Bryn Phillips, UCD-MPSL

This chapter covers work performed under Task 3.20: *Toxicity Assay Testing under this PRISM Grant # 041355520. In addition to the pyrethroid sensitivity study funded by this grant, this report includes results from the RMP Exposure and Effects Pilot Study-2004 which investigated the relative sensitivities of the same estuarine amphipods to three compounds of concern in the San Francisco Estuary: copper, fluoranthene, and chlorpyrifos.*

2.1 ABSTRACT

A series of dose-response experiments were conducted to compare the relative sensitivities of toxicity test protocols using the amphipods *Ampelisca abdita* and *Eohaustorius estuarius*. *A. abdita* is one of the dominant infaunal species in the San Francisco Estuary, and *E. estuarius* is the primary sediment toxicity species used in the Regional Monitoring Program. Experiments were conducted with a formulated sediment spiked with copper, fluoranthene, chlorpyrifos, and the three pyrethroid pesticides permethrin, bifenthrin and cypermethrin, all chemicals of concern in this region. The current results showed that the protocol with *A. abdita* was more sensitive to fluoranthene and much more sensitive to copper, while *E. estuarius* was more sensitive to chlorpyrifos, and much more sensitive to the pyrethroid pesticides.

These results, considered in conjunction with those from previous spiking studies (Weston 1995; and DeWitt *et al.* 1989 and 1997), suggest that, in general, *A. abdita* is more sensitive to metals, *E. estuarius* is more sensitive to pesticides, and the protocols with the two species have roughly comparable sensitivities to hydrocarbons. The preponderance of evidence from previous field studies indicate that *E. estuarius* is considerably more responsive to ambient samples (Bay *et al.* 2005). One reason for this may be that tube-building behavior of *A. abdita* isolates this species from contaminants in pore water, and results from our current experiments generally support this hypothesis. Based on the combined evidence from spiking experiments and side-by-side tests of ambient samples, the results suggest that the protocol with *E. estuarius* demonstrates adequate sensitivity to support continued use in the RMP. *E. estuarius* is also recommended by the State Water Resources Control Board as the primary sediment testing amphipod for use in assessing compliance with newly developed sediment quality objectives. In situations where copper is of concern, use of the embryo-larval development protocol with the mussel *Mytilus galloprovincialis* compensates for the reduced sensitivity of *E. estuarius*. If cadmium contamination is a concern, both of these protocols should be considered less protective than the protocol with *A. abdita*, or the protocol with the copepod *A. tenuiremus*.

2.2 INTRODUCTION

This project was designed to develop dose-response LC50 data for standard EPA sediment toxicity test protocols, in order to evaluate their sensitivities relative to each other and to other ecologically relevant San Francisco Estuary species. Experiments were conducted using six chemicals: copper, chlorpyrifos, fluoranthene, and the three pyrethroid pesticides, permethrin, bifenthrin, and cypermethrin. The protocols evaluated were the 10 day acute tests with the amphipods *Eohaustorius estuarius* and *Ampelisca abdita*. *Ampelisca abdita* is the dominant resident amphipod species in the Estuary. *Eohaustorius estuarius* is the RMP Status and Trends sediment toxicity test species. Both species are used extensively in sediment toxicity monitoring in estuarine/marine systems. The two amphipods have different behavioral characteristics that may affect their exposure to contaminants: *Eohaustorius* is a free-burrowing detritivore, and *Ampelisca* is a tube-dweller. Previous experiments with contaminated field sediments have shown that these two species respond differently to ambient samples, but interpretation of these results has been confounded by other factors such as sediment grain size, percent clay and total organic carbon (TOC). To avoid these confounding factors, experiments were conducted using a formulated sediment having grain size and TOC distributions within the range tolerated by both amphipod species. The formulated sediment was spiked with single chemicals to avoid the additional complexity imposed by contaminant mixtures.

2.3 METHODS

Ten-day solid-phase dose-response toxicity tests were conducted with copper, chlorpyrifos, and fluoranthene as part of the RMP Exposure and Effects Pilots Study. One range finding test and two definitive tests were conducted with each chemical using both species. Copper was selected as a model metal contaminant because it continues to be of concern in the Estuary, and because there is currently no solid-phase dose-response information on copper toxicity to either *Eohaustorius* or *Ampelisca*. Fluoranthene, a polycyclic aromatic hydrocarbon (PAH), was selected for similar reasons. PAH contamination continues to be of concern in Estuary sediments, and while there is some dose-response data for fluoranthene toxicity to *Eohaustorius*, there is none available for *Ampelisca*. Experiments were also conducted with the organophosphate (OP) pesticide chlorpyrifos. Chlorpyrifos was selected because there is no dose-response information for this compound with either amphipod, it continues to be used in agriculture, and as a less water soluble OP pesticide, it is often found in SF Estuary sediments (Hunt *et al.* , 2001). One additional benefit of using chlorpyrifos in these spiking experiments is that it can be inexpensively analyzed using enzyme-linked immunosorbent assays (ELISAs).

We also investigated the relative sensitivities of these two amphipods to three pyrethroid pesticides, as part of a separate PRISM study awarded to SFEI (project manager Sarah Lowe). The PRISM study was conducted using sediments spiked with cypermethrin, bifenthrin and permethrin. These three pyrethroids are of growing concern to Bay Area water quality agencies because pyrethroids in general are replacing organophosphate pesticides as the primary pesticides used in residential and structural pest control in urban applications.

Formulated Sediment

Formulated sediment was used in all spiking experiments. This sediment was created using equal parts Salinas River, California reference site sediment and clean, kiln-dried sand (#60, RMC Pacific Materials, Monterey, CA, USA). The sediment was amended with 0.75% organic peat moss (Uni-Gro, Chino, CA, USA). One kilogram (dry weight) of formulated sediment was prepared by combining 500g reference sediment, 500g sand, and 7.5g peat with 350 mL water. Granite Canyon seawater adjusted to 20‰ and 28‰ with distilled water was used for tests with *E. estuarius* and *A. abdita*, respectively. Chemical analysis of formulated sediment demonstrated non-detects for 55 organic contaminants. The final measured TOC and grain size distribution for the formulated sediment was as follows: TOC = 0.78%; Medium Sand = 13.57%; Fine Sand = 48.17%: Silt and Clay (% fines) = 38.27%.

Spiking Methods

Chlorpyrifos, copper, fluoranthene, permethrin, bifenthrin and cypermethrin were spiked into formulated sediment. Chemical stock solutions, exposure concentrations, and equilibration times are outlined in Table 2.1. Different methods were used to spike the three chemicals. Copper stock solutions were spiked directly into the water used to prepare the formulated sediment. Organic stock solutions were diluted to 50 mL with acetone, poured into jars, and allowed to volatilize (with the jar caps off) on a Wheaton roller apparatus placed under a fume hood (Wheaton Model 348940-48, after Ditsworth *et al.* 1990). After volatilization, dry materials, peat and water were added to the containers and rolled for the first 24 hours of the equilibration time.

2.4 TOXICITY TESTS

Solid-phase exposures

Ampelisca abdita and *Eohaustorius estuarius* exposures followed US EPA protocol (1994), with the following modifications. Five replicate 250 mL beakers containing 50 mL sediment and 200 mL overlying water were used for each chemical concentration. The exposures were conducted under static conditions for 10 days with slow aeration using standard procedures. Each replicate contained five organisms. *A. abdita* were obtained from Brezina and Associates (Dillon Beach, CA) or Aquatic Research Organisms (Hampton, NH). *E. estuarius* were obtained from Northwestern Aquatic Sciences (Newport, OR). Three tests with each chemical were conducted with each species, one rangefinder and two definitive tests. Sediment and interstitial water chemical confirmation samples were collected from spiking jars at the initiation of the second definitive test. Tests with the three pyrethroid pesticides did not include interstitial water analyses. The test protocol for *Eohaustorius estuarius* was conducted at 15 °C using seawater adjusted to 20 ‰. The test protocol for *Ampelisca abdita* was conducted at 15 °C using seawater adjusted to 20 ‰.

Water-only exposures

Information on the responses of *E. estuarius* and *A. abdita* to copper, fluoranthene, and chlorpyrifos were used to compare the relative sensitivities of these amphipods and to help interpret the responses of the amphipods in the solid-phase protocols. When available, water-only LC50s of these species were compiled from the literature. Because water-only data were not available for chlorpyrifos, dose-response experiments in water were conducted with chlorpyrifos using both species. For these exposure, chlorpyrifos stock solutions were prepared as described above using methanol as the solvent. A secondary stock solution was prepared from these, and chlorpyrifos was spiked into seawater using the secondary stock. Methanol concentrations in the secondary stock resulted 0.10% methanol in the highest concentration of chlorpyrifos tested with *E. estuarius*, or 0.3% methanol in the highest concentration of chlorpyrifos tested with *A. abdita*. Because these are lower than the concentrations of methanol typically used in TIEs with these species (1% methanol for *E. estuarius* - Anderson *et al.* 2006; 0.75% methanol for *A. abdita* - Ho *et al.* 2006), no solvent controls were used in these tests. Tests were conducted in 250ml glass beakers, each containing 5 animals. Tests were conducted for 96h with 5 replicate per concentration. Three separate water-only chlorpyrifos tests were conducted with each amphipod species. *E. estuarius* and *A. abdita* were tested at 20 and 28‰ salinity, respectively.

2.5 RESULTS AND DISCUSSION

The results showed that the protocols using the two amphipod species had variable sensitivities to the six chemicals (Tables 2.2 and 2.3). *E. estuarius* was slightly more sensitive than *A. abdita* to chlorpyrifos-spiked sediment (mean LC50s = 0.103 µg/kg and 0.124 µg/kg, respectively). *A. abdita* was considerably more sensitive to copper than *E. estuarius* (mean LC50s = 61 mg/kg and 534 mg/kg). *A. abdita* was also more sensitive to fluoranthene than *E. estuarius* (mean LC50s =28 µg/kg and 85 µg/kg, respectively). The protocol using *E. estuarius* was considerably more sensitive to all three pyrethroid pesticides. The mean LC50s for *A. abdita* and *E. estuarius*, respectively, were: 0.948 and 0.008 µg/kg for bifenthrin-spiked sediments. 0.469 and 0.011 µg/kg for cypermethrin-spiked sediments, and 8.913 and 0.140 µg/kg for permethrin-spiked sediments.

These results are comparable to those reported by Weston (1995) using sediment spiked with cadmium, DDT, and crude oil. In those experiments *E. estuarius* was more sensitive to the organochlorine pesticide DDT than was *A. abdita* (LC50s = 554 and 769 µg/kg, respectively). *A. abdita* was much more sensitive than *E. estuarius* to cadmium (LC50s = 643 and > 1,000 mg/kg, respectively). The two species demonstrated comparable sensitivities to crude oil (LC50s = 528 and 630 µg/kg, for *A. abdita* and *E. estuarius*, respectively).

Our current results with fluoranthene differ from those reported by DeWitt *et al.* (1989) who found a lower LC50 for *E. estuarius* using fluoranthene-spiked sediment (LC50 = 11.8 mg/kg). DeWitt (1997) also reported *E. estuarius* to be more sensitive than *A. abdita* to sediment spiked with a mixture of 5 PAHs (PAH mixture LC50s = 320 and 120 mg/kg, for *A. abdita* and *E. estuarius*, respectively). The overall trend from current and previous spiked-sediment experiments suggests that *E. estuarius* is more sensitive to pesticides (e.g., DDT, chlorpyrifos, and particularly pyrethroids), and that *A. abdita* is more sensitive to metals (e.g., copper and cadmium). Though the results are variable, both species appear to have roughly comparable sensitivities to hydrocarbons based on results with crude oil, fluoranthene, and PAH mixtures.

The differences in sensitivities between the two protocols using the three pyrethroid pesticides might be partially due to differences in exposure conditions. Pyrethroids are characterized as either Type I or Type II. Type I pyrethroids such as bifenthrin and permethrin do not contain a cyano- group, and have a negative temperature toxicity action. They are therefore characterized as being more toxic at lower temperature. Type II pyrethroids like cypermethrin contain a cyano- group and are characterized as being more toxic at higher temperature. The protocol with *E. estuarius* is conducted at 15°C, using an overlying water salinity of 20‰. The protocol with *A. abdita* is conducted at 20°C, using an overlying water salinity of 28‰. It is possible the differences in temperature between the two protocols influenced the relative responses of the two amphipod species to bifenthrin and permethrin. However, the fact that the protocol with *E. estuarius* was considerably more sensitive to the Type II pyrethroid cypermethrin suggests that temperature differences may not have significantly influenced the results. If temperature affected the relative response of the two amphipods, we would have expected the protocol with *A. abdita* to be more sensitive to cypermethrin, given that the Type II pyrethroids are expected to be more toxic at higher temperatures.

It is also possible that salinity differences between the two protocols could have influenced test results. For example, lower salinities have been shown to influence response of some species to metals. Anderson *et al.* (1995) showed that topsmelt embryos were more sensitive to copper when tested at lower salinities. These authors suggested this could have been due to increased cupric ion activity due to dilution of organic ligands in lower salinity tests. In addition, euryhaline species such as *E. estuarius* may be stressed by osmotic challenge at lower salinities. The influence of this on relative response of the two amphipod protocols to organic chemicals is beyond the scope of the current study.

Results with spiked sediments do not suggest a clear trend in the relative sensitivity of the two amphipod species. Despite this, results from most studies using field-collected sediments suggest that there are considerable differences in response between *E. estuarius* and *A. abdita*. In a recent review of side-by-side sediment tests conducted with these two species using field-collected sediments from a variety of monitoring studies along the west coast, Bay *et al.* (2005) reported that most studies indicated *E. estuarius* was much more responsive to field sediments than *A. abdita*. These results corroborate results of recent NOAA/EMAP studies that also suggest *A. abdita* is less sensitive to field-collected sediments (Anderson *et al.* in press). Reasons for the differences in results using laboratory-spiked and field-collected sediments are not clear. It is possible that differences in response between the two amphipods are partly due to greater sensitivity of *E. estuarius* to fine-grained sediments, but a number of studies suggest grain size plays a minimal role in survival of this species in tests using field sediments (DeWitt *et al.* 1989; Bay *et al.* 2005; Anderson *et al.* 1999; Anderson *et al.* in press; Tay *et al.* 1998).

Though grain size may not cause significant mortality in field sediments, observed differences in results using spiked sediments may be related to differences in grain size distributions between sediments. Our current spiking experiments used relatively coarse-grained formulated sediment (38% fines), while most field test sediments are finer–grained (i.e., > 63% fines; Bay *et al.* 2005). It has been hypothesized that *E. estuarius* responds to contaminated field sediments differently than *A. abdita* because *A. abdita* is a tube-builder, and is therefore more isolated from sediment contaminants than free burrowing species such as *Rhepoxynius abronius* or *E. estuarius.* Tube building rates, however, may be affected by the sediment particle size distribution. It is possible that the coarser-grained formulated sediment inhibited the rate of tube building by *A. abdita* in our spiked sediment experiments. If this were the case, *Ampelisca* may have been exposed to the spiked chemicals for longer periods than would occur if finer-grained sediments were used.

Comparison of the ratios of LC50s for *A. abdita* and *E. estuarius* from water-only and spiked sediment dose-response experiments suggests that *A. abdita* is sometimes less sensitive in solid-phase exposures than would be expected based on pore-water concentrations (Table 4). For example, the copper LC50s for *E. estuarius* and *A. abdita* in water-only tests were 33,300 µg/L and 20.5 µg/L, respectively, and the ratio of these LC50s was 1,624. The ratio of solid-phase copper LC50s for *E. estuarius* and *A. abdita* in spiked-sediment tests was much lower at 8.8 (LC50s = 534.3 µg/g and 60.7 µg/g, respectively). The fluoranthene LC50s for *E. estuarius* and *A. abdita* in water-only tests were >70 µg/L and 9.9 µg/L, respectively, and the ratio of these LC50s was >7.07 (Table 2.4). The ratio of fluoranthene solid-phase LC50s for *E. estuarius* and *A. abdita* in spiked-sediment tests was also considerably lower at 3.1 (LC50s = 85.3 µg/g and 27.6 µg/g, respectively). With copper and fluoranthene, therefore, there was a much greater difference in response between these two species in water-only exposures than in spiked-sediment tests. This suggests that some factor associated with the sediment matrix mediates the difference in response between these species. Comparison of the water LC50s to the measured interstitial water concentrations supports this suggestion. The interstitial water copper concentrations measured in treatments that bracketed the solid-phase copper LC50 for *A. abdita* were considerably higher (430 – 2,920 µg/L) than the reported water-only copper LC50 for this species (20.5 µg/L). Similarly, the interstitial water fluoranthene concentrations measured in the treatments that bracketed the solid-phase fluoranthene LC50 for *A. abdita* were considerably higher (43.4 – 102 µg/L) than the reported water-only fluoranthene LC50 for this species (9.9 µg/L). This indicates that *A. abdita* survival was higher in sediments than would be expected based on water-only LC50s, and suggests that tube construction may reduce interstitial water contact with this species, despite the fact that these experiments used a formulated sediment with lower fine-grained fractions. This trend did not hold true in the tests with chlorpyrifos. The water-only chlorpyrifos LC50s for *E. estuarius* and *A. abdita* were 0.529 and 0.645 µg/L, respectively, and the ratio to these LC50s was 1.22. The sediment LC50s were 0.103 and 0.124 mg/kg for *E. estuarius* and *A. abdita*, respectively, and the ratio of these was a nearly identical 1.20. Thus, the relative sensitivity of the two protocols was roughly similar in water-only and sediment exposures using chlorpyrifos. The interstitial water concentrations of chlorpyrifos never exceeded the LC50 in the tests with *A. abdita* or *E. estuarius,* but a clear dose-response relationship was observed using both amphipod protocols.

One approach to investigate differences in response to field sediments involves conducting side-by-side amphipod tests using field sediments that have been subjected to toxicity identification evaluations (TIEs). We have used this approach in synoptic tests with sediments from Moss Landing Harbor, California (Anderson *et al.* 1999). These experiments demonstrated that *E. estuarius* was considerably more sensitive to harbor sediments than *A. abdita* and subsequent TIEs with *E. estuarius* showed that toxicity was due to organic chemicals, most likely organochlorine pesticides. This approach of combining side-by-side comparisons of field sediments that are then subjected to TIE procedures can be used to demonstrate whether differences in responses between the two amphipods are due to chemical contaminants rather than non-contaminant factors, such as grain size. Similar experiments should be done with additional field sediments that have been characterized using TIE procedures.

An additional goal of these experiments was to compare the relative sensitivities of *E. estuarius* and *A. abdita* to other infaunal species in the San Francisco Estuary to determine if tests with amphipods are sufficient to protect other sensitive species in the Estuary. Meiobenthic copepods were selected for this comparison. Dose-response data for the copepods *Amphiascus tenuiremus* and *Schizopera knaberi*, were compiled for copper, fluoranthene, and chlorpyrifos (Table 2.5). The results suggest that *E. estuarius* and *A. abdita* have sensitivities comparable to these copepod species. The 96-h chlorpyrifos spiked-sediment LC50 for the copepod *Amphiascus tenuiremus* is 0.066 µg/g, which is within the ranges of the chlorpyrifos LC50s for both amphipod species. Both amphipods were more sensitive to fluoranthene than the copepod *Schizopera knaberi*. The 96-h LC50 for fluoranthene toxicity *S. knaberi* was >2,100 µg/g, considerably greater than the range of sensitivities of both amphipods to this PAH. No spiked sediment data were available for copper using copepods. The 96-h cadmium water-only LC50s for *Amphiascus tenuiremus, E. estuarius,* and *A. abdita* were 240, 9,330, and 330 µg/L, respectively. The 48h LC50 for cadmium toxicity to *M. edulis* embryo development, the other standard protocol used in the RMP is 3,890 µg/L (Phillips *et al.* 2003), also considerably less sensitive to this metal than *A. abdita*. It should be noted that the lower sensitivity of *E. estuarius* to copper relative to *A. abdita* is probably not significant in terms of environmental protection in the Estuary because the 48h LC50 for copper toxicity to *M. galloprovincialis* embryo development is 7 µg/L (Phillips *et al.* 2003), and this test is used in the RMP. However, if cadmium contamination is of concern, the protocols with *E. estuarius* and *M. galloprovincialis* do not offer sufficient protection relative to the protocols for *A. abdita*, or the copepod *A. tenuiremus*.

2.6 CONCLUSION

Results of the current experiments with *A. abdita* and *E. estuarius* did not conclusively demonstrate that one protocol is more sensitive than the other using sediments spiked with single chemicals. The evidence presented here supports data from Weston (1995) and shows that *A. abdita* is more sensitive to metals, *E. estuarius* is more sensitive to pesticides, and when compared to results of Weston (1995) and DeWitt *et al.* (1989 and 1997), the protocols demonstrate roughly comparable sensitivities to hydrocarbons. While there are chemical-specific differences, published results suggest that the sensitivities of tests with these amphipods are comparable to those with meiobenthic copepods. Our data suggest that tube-building by *A. abdita* may reduce its exposure to contaminants in whole sediment exposures, but additional experiments should be conducted using sediments which demonstrate a range of grain sizes. Regardless of the reason for differences in response, we conclude that the weight-of-evidence from these and other studies shows that tests using *E. estuarius* are more responsive in most cases, particularly in side-by-side comparisons with field sediments, and are therefore appropriate for continued use in the Regional Monitoring Program. This is supported by recent recommendations from the State Water Resources Control Board. The State Board lists *E. estuarius* as the primary amphipod species for use in sediment toxicity tests to assess compliance with newly developed statewide sediment quality objectives.

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Table 2.1. Summary of sediment spiking methods.

Chemical	Amphipod	Stock Solution Concentrations	Stock Solution Matrix	Equilibration Time	Exposure Concentrations (mg/kg) (Rangefinder and Definitive)
Chlorpyrifos	*A. abdita*	0.1-2.5 g/L	Acetone	28 Days	0.032-100 and 0.018-0.18
	E. estuarius	0.1-2.5 g/L	Acetone	28 Days	0.032-100 and 0.032-0.32
Copper	*A. abdita*	20 g/L	Nanopure Water	14 Days	1.8-320 and 18-180
	E. estuarius	20 g/L	Nanopure Water	14 Days	100-1800 and 180-1800
Fluoranthene	*A. abdita*	1.3-7.5 g/L	Acetone	28 Days	5.6-320 and 5.6-56
	E. estuarius	4.0-8.0 g/L	Acetone	28 Days	10-180 and 18-180
Bifenthrin	*A. abdita*	250 mg/L	Acetone	7 Days	0.01–100 and 0.18-10
	E. estuarius	10 mg/L	Acetone	7 Days	0.01-100 and 0.0018-0.1
Cypermethrin	*A. abdita*	200 mg/L	Acetone	7 Days	0.001-10 and 0.032-1.0
	E. estuarius	200 mg/L	Acetone	7 Days	0.001-10 and 0.032-0.56
Permethrin	*A. abdita*	5 g/L	Acetone	7 Days	0.05-500 and 5.6-180
	E. estuarius	100 mg/L	Acetone	7 Days	0.05-500 and 0.056-5.6

Table 2.2. Summary of sediment LC50 values (based on nominal concentrations).

		LC50 (mg/kg)				
Chemical	Amphipod	Rangefinder	Definitive 1	Definitive 2	Mean	SD
Chlorpyrifos	*A. abdita*	0.0433	0.182	0.146	0.124	0.072
	E. estuarius	0.0957	0.122	0.0900	0.103	0.017
Copper	*A. abdita*	66.6	85.5	29.9	60.7	28.3
	E. estuarius	726	355	522	534.3	185.8
Fluoranthene	*A. abdita*	16.1	42.3	24.4	27.6	13.4
	E. estuarius	67	107	82	85.3	20.2
Bifenthrin	*A. abdita*	1.069*	1.373	0.522	0.948**	0.432
	E. estuarius	0.021*	0.009	0.006	0.008**	0.008
Cypermethrin	*A. abdita*	0.190*	0.429	0.509	0.469**	0.166
	E. estuarius	0.022*	0.008	0.014	0.011**	0.007
Permethrin	*A. abdita*	21.594*	7.468	10.358	8.913**	7.463
	E. estuarius	0.388*	0.143	0.137	0.140**	0.143

*Test 1 = range finding test. ** Mean calculated based on the two definitive tests.

Table 2.3. Measured concentrations of select treatments from amphipod exposures. Eliminate decimal place for % difference.

Chemical	*A. abdita*				*E. estuarius*			
	Nominal (mg/kg)	Measured (mg/kg)	Percent Nominal	Interstitial (ug/L)	Nominal (mg/kg)	Measured (mg/kg)	Percent Nominal	Interstitial (ug/L)
Chlorpyrifos	0.018			0.133	0.032	0.00809	25.3	0.166
	0.032			0.157	0.056			0.216
	0.056	0.0184	32.9	0.172	0.1	0.0835	83.5	0.268
	0.1	0.0909	90.9	0.454	0.18			0.628
	0.18	0.105	58.3	0.377	0.32	0.503	157.2	1.384
Copper	18	35.7	198.3		320	327	102.2	5.30 mg/L
	37			0.43 mg/L	560	590	105.4	
	56	65.1	116.3		1000	978	97.8	13.9 mg/L
	180	200	111.1	2.92 mg/L				
Fluoranthene	5.6	1.8	32.1	9.02	56	33.6	60.0	52
	18	9.6	53.3	43.4	100	67.3	67.3	138
	56	21.5	38.4	102	180	108	60.0	
Bifenthrin	0.32	0.242	75.6	NA	0.0032	0.0023	71.9	NA
	1.00	0.470	47.0		0.010	0.008	80.0	
	3.2	2.190	68.4		0.032	0.020	62.5	
	0.32	0.270	84.4		0.0032	0.0027	84.4	
	1.0	0.705	70.5		0.010	0.008	80.0	
	3.2	2.65	82.8		0.032	0.018	56.3	
Cypermethrin	0.1	0.187	187.0	NA	0.0032	0.0052	163.0	NA
	0.32	0.696	218.0		0.010	0.031	310.0	
	1.0	2.271	227.0		0.032	0.052	163.0	
	0.1	0.166	166.0		0.0032	0.0160	500.0	
	0.32	0.427	146.0		0.010	0.022	220.0	
	1.0	1.719	172.0		0.032	0.062	194.0	
Permethrin	5.6	2.809	50.2	NA	0.056	0.035	62.5	NA
	10.0	3.552	35.5		0.100	0.070	70.0	
	18.0	7.655	42.5		0.560	0.271	48.4	
	5.6	3.480	62.1		0.056	0.037	66.1	
	10.0	5.856	58.6		0.100	0.0592	59.2	
	18.0	7.508	41.7		0.560	0.374	66.8	

Table 2.4. Relationship between water-only LC50s, measured interstitial water concentrations, and bulk-phase LC50s for experiments conducted with *A. abdita* and *E. estuarius*.

Chemical	*A. abdita*				*E. estuarius*			
	Nominal Conc. (mg/kg)	Sediment LC50 (mg/kg)	Interstitial Measured (ug/L)	Water LC50 (ug/L)	Nominal Conc. (mg/kg)	Sediment LC50 (mg/kg)	Interstitial Measured (ug/L)	Water LC50 (ug/L)
Chlorpyrifos	0.018		0.133		0.032		0.166	
	0.032		0.157		0.056		0.216	
	0.056		0.172		0.1	0.103	0.268	
	0.1	0.124	0.454	0.645 [b]	0.18		0.628	0.529 [b]
	0.18		0.377		0.32		1.384	
Copper	18			20.5[a]	320		5,300	
	37		430		560	534 [b]		
	56				1000		13,900	
		60.7 [b]						
	180		2,920					33,300 [e]
Fluoranthene	5.6		9.02	9.9 [c]	56		52	
	18		43.4			85.3 [b]		>70.0 [d]
		27.6 [b]	102		100		138	
	56				180			

[a]Berry *et al.* 1996; [b]Current study; [c]Boese *et al.* 1997; [d]Werner and Nagel 1997; [e] Anderson *et al.* 2006.

Table 2.5. Sediment LC50 values for fluoranthene and chlorpyrifos and water LC50 for copper using selected copepod species. Use mg/kg to be consistent with other tables.

Copepod species	**Chemical**	**Sediment LC50 µg/g = mg/kg**	**Water LC50 µg/L**	**Reference**
A. tenuiremus	Chlorpyrifos	0.066		Chandler and Green 2001
S. knaberi	Fluoranthene	>2,100		Lotufo 1997
A. tenuiremus	Cadmium	37.9	240	Green *et al.* 1993
T. furcata	Copper		178	Bechman 1994

CHAPTER 3. DEVELOPMENT OF TOXICITY IDENTIFICATION EVALUATION (TIE) METHODS FOR PYRETHROID PESTICIDES

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This chapter covers work performed under Task 3.30: *Develop Toxicity Identification Procedures* *under this PRISM Grant # 041355520.*

3.1 INTRODUCTION

Toxicity Identification Evaluations (TIEs) are laboratory procedures designed to determine the agents responsible for toxicity in a sample. First designed for water, these methods have been adapted for sediments and sediment interstitial water by the U.S. Environmental Protection Agency and others (Ho *et al.* 2006; Anderson *et al.* 2006a). TIEs are designed to proceed in three phases. Phase I manipulations characterize the classes of chemicals causing toxicity and typically differentiate toxicity caused by organic chemicals, metals, or ammonia. Phase II manipulations identify the cause of toxicity, and Phase III TIEs are designed to confirm the chemical(s) identified in Phase II. Ideally, sediment TIEs are conducted using both the aqueous matrix (sediment interstitial water) and the solid-phase matrix (whole sediment). Information from solid-phase and interstitial water TIEs are combined in a weight-of-evidence to determine the cause(s) of toxicity.

Because of their hydrophobicity, pyrethroid pesticides are associated with sediments in the environment. TIEs specific to identifying toxicity caused by these insecticides therefore need to be amenable for use in both solid-phase and interstitial water sediment matrices. Phase I (characterization), II (identification), and III (confirmation) TIE methods found to be useful for characterizing and identifying pyrethroid toxicity are listed in Table 3.1.

Phase I solid-phase TIE methods useful for characterizing toxicity caused by pyrethroid pesticides include addition of carbon sources to reduce pyrethroid bioavailability. Two carbon sources have been used successfully, fined-grain coconut charcoal and the carbonaceous resin Ambersorb 563® (see Ho et. al. 2006, and Anderson *et al.* 2006a). Evidence from a number of studies suggests both carbon sources reduce toxicity due to pyrethroid pesticides. One advantage of using Ambersorb is that it can be recovered from the sediment and eluted with solvent as part of Phase II TIE procedures (discussed below; see also Anderson *et al.* 2006a; Phillips *et al.* 2006). Similar Phase I procedures are used to extract pyrethroid pesticides from interstitial water (IW). Because IW is an aqueous matrix, it can be passed through a solid-phase extraction (SPE) column to remove non-polar organic chemicals such as pyrethroids. The column can then be eluted with solvent, and toxicity of the column eluate can be assessed as part of Phase II TIE procedures. Two additional Phase I TIE procedures that have been shown to be useful in building a weight-of-evidence for characterizing pyrethroid pesticide toxicity include addition of the metabolic inhibitor piperonyl butoxide (PBO), and manipulation of test temperature. PBO is used to inhibit mixed function oxidase enzymes, which metabolize chemicals *in vivo*. It is used as a potent synergist in formulations containing pyrethroids, and is useful as a TIE tool because increase in sample toxicity with the addition of PBO can indicate the presence of pyrethroids.

Detailed methods for using PBO in solid-phase and IW TIEs are provided in a number of recent publications (Anderson *et al.* 2003; Phillips *et al.* 2006, Anderson *et al.* 2006a and b; Amweg *et al.* 2006). Pyrethroids are characterized as either Type I or Type II. Type I pyrethroids such as bifenthrin and permethrin do not contain a cyano- group, and have a negative temperature toxicity action. They are therefore characterized as being more toxic at lower temperature. Type II pyrethroids like cypermethrin contain a cyano-group and are characterized as being more toxic at higher temperature. Therefore samples containing Type I pyrethroids might demonstrate greater toxicity when tested at lower temperature (e.g., Anderson *et al.* 2006a; Anderson *et al.* 2006b; Phillips *et al.* 2004; Weston *et al.* 2006).

Phase II TIE procedures build on evidence from the Phase I TIE results and are designed to identify specific chemicals causing toxicity. An example of a Phase II TIE method that can be used to indicate toxicity caused by pyrethroid pesticides is reduction of sample toxicity with addition of a carboxylesterase enzyme. Carboxylesterases are enzymes that hydrolyze ester-containing compounds, such as pyrethroids, to their corresponding nontoxic acid and alcohol detoxification products. Reduction of sample toxicity with the addition of this enzyme has the potential to be a powerful Phase II TIE tool indicating the presence of pyrethroid pesticides (Wheelock *et al.* 2006).

As discussed above, one of the most important steps in Phase II TIEs involving non-polar organic compounds is solvent elution of these compounds from solid-phase extraction media. In this procedure, the solvent eluate is spiked into clean water and toxicity is assessed to confirm that chemicals removed from the extraction media are toxic when returned to water. The eluates are then analyzed to identify specific constituents responsible for toxicity. Examples of two types of extraction media used for this purpose are Ambersorb 563 which is used to remove organics from solid-phase sediment samples, and solid-phase extraction (SPE) columns (C_{18} or OASIS HLB) which are used to extract organics from interstitial water (methods summarized in Ho *et al.* 2006 and Anderson *et al.* 2006a, and references therein).

Phase III TIEs are designed to confirm that chemicals identified in Phase II are the specific chemicals responsible for toxicity. One of the most common methods is the species sensitivity approach. In this approach, chemicals measured in sediment and interstitial water are compared to toxicity thresholds derived from dose-response experiments conducted using spiked sediments or water samples. If chemical concentrations in the original sample exceed known toxicity thresholds, this can be used to confirm results of the Phase I and II TIEs. Confirmation of the cause of toxicity is strengthened if the chemicals measured in the Phase II Ambersorb eluates (solid-phase samples), or in SPE column eluates (IW samples) also exceed known toxicity thresholds. In the case of pyrethroids, sediment and water-only dose response data have been developed for the majority of current-use pesticides, primarily using the freshwater amphipod *Hyalella azteca* (e.g., Maund *et al.* 2002; Amweg *et al.* 2005; Anderson *et al.* 2006c).

The San Francisco Estuary Institute convened two workshops in March 2005 and May 2006. The preliminary workshop was a forum to discuss various issues concerned with pyrethroid pesticides, evaluate what topics were being studied by other researchers, and to guide the focus of the TIE development by UC Davis. The second workshop served as a forum to present recent work and to discuss issues important to both the toxicologists and chemists involved in pyrethroid research locally. The workshops were attended by toxicologists and chemists involved in pyrethroid pesticide research, and the primary objectives were to compile TIE methods for identifying toxicity caused by pyrethroid pesticides, describe current projects developing TIE procedures, describe analytical methods for measuring low concentrations of pyrethroids in sediments and water, and identify methods requiring additional research (see Appendix D for meeting agendas and notes).

A number of researchers presented results of recent work involving pyrethroids, and this information was used to amend study plans to ensure that research teams were not duplicating efforts. A workshop summary was produced by SFEI, and this described TIE and chemistry research being pursued by the various researchers. At the time of the 2005 workshop, TIE research at UC Berkeley (PI Don Weston) involved developing methods using PBO and temperature manipulations to create toxicity signatures for specific pyrethroids. TIE research at Aquascience (PI Jeff Miller – PRISM Proposal No. 0032) evaluated the carboxylesterase enzyme for application to water TIEs using *Ceriodaphnia dubia* (Note: this work was conducted under a separate PRISM grant awarded to TDC, and was conducted in conjunction with the current project). Research at UC Davis emphasized the following TIE procedures for the current PRISM project: 1) efficacy of the carboxylesterase enzyme for use in sediment TIEs with the amphipod *Hyalella azteca*; 2) evaluation of Phase II procedures for extracting pyrethroids from sediment interstitial water using solid-phase extraction columns; 3) evaluation of solvent elution procedures for single pyrethroids and pesticide mixtures using solid-phase extraction columns.

3.2 CARBOXYLESTERASE EXPERIMENTS

Methods

The utility of the caboxylesterase for use in TIEs with pyrethroid pesticides is described above, and is summarized in Wheelock *et al.* (2006). In order to use this enzyme in TIEs with the amphipod *Hyalella azteca*, basic information regarding the efficacy of the enzyme to reduce toxicity of pyrethroid pesticides was required. This research was conducted by spiking laboratory well water and sediment interstitial water with known concentrations of bifenthrin and permethrin and assessing toxicity of these solutions after carboxylesterase additions.

The following is a brief summary of the methods, more detailed descriptions are provided in Wheelock et. al. (2006). Laboratory control water and interstitial water were spiked with bifenthrin and permethrin prepared from secondary stock solutions prepared in methanol (described below). Bifenthrin was spiked at 0, 20, 60, and 100 ng/L, and permethrin was spiked at 100, 150, and 200 ng/L. These concentrations corresponded roughly to 2, 6, and 10 toxic units of bifenthrin, and 5, 7.5, and 10 toxic units of permethrin (Anderson *et al.* 2006c). Increasing strengths of carboxylesterase esterase enzyme derived from porcine liver (Aldrich Chemical, St. Louis, MO, USA) were added to increasing concentrations of bifenthrin and permethrin to determine the reductions in toxicity via esterase-mediated hydrolysis of the pyrethroids.

Initial experiments used a liquid preparation of enzyme (activity = 184 units/mL) that was diluted to 10.03 units/mL. Based on X = 2.5×10^{-3} enzyme activity units/mL, enzyme exposures were conducted at 0, 100, 500, 1000, and 5000X. Subsequent experiments used a lyophilized powder enzyme preparation (activity = 20 units/mg, Sigma-Aldrich, Inc., St. Louis, MO) that was used to create a stock solution of 1 mg/mL. Lyophilized enzyme exposures were conducted at 0, 10, 50, 100, and 500X, and then at 0, 100, 500, 1000, and 5000X.

Results and Summary of Carboxylesterase Experiments

The complete methods and results of these experiments are summarized in Wheelock *et al.* (2006), and a brief summary of the results are provided here. The original liquid preparation of the enzyme introduced high concentrations of ammonia into the spiked water samples and confounded the toxicity results. Subsequent experiments therefore emphasized use of the lyophilized powder form of the enzyme. These did not result in the production of unionized ammonia and allowed better evaluation of the esterase enzyme.

H. azteca could be exposed to enzyme concentrations up to a strength of 500x without causing amphipod mortality (Table 3.2). At the highest strength, the enzyme removed approximately 2 TUs of bifenthrin toxicity (20 ng/L) in laboratory water, and approximately 6 TUs of bifenthrin toxicity (60 ng/L) in the Salinas River reference site interstitial water. The enzyme removed up to 10 TUs of permethrin toxicity (200 ng/L) in both laboratory and interstitial water.

These results suggest that the esterase enzyme provides a useful tool to help characterize toxicity due to pyrethroid pesticides. Results presented in Wheelock *et al.* (2006) show that the enzyme successfully mitigated toxicity of pyrethroids spiked into laboratory well water and sediment interstitial water. Since the majority of ambient samples contain pyrethroid concentrations considerably lower than those used in the spiking experiment, the enzyme is expected to produce greater reductions in toxicity in most samples. In samples where concentrations of pyrethroid concentrations may exceed the capacity of the enzyme, a dilution series of the original sample may be used to increase its effectiveness. In addition to its use with interstitial waters, methods to treat sediment overlying water with the enzyme have also been developed. The utility of the enzyme in characterizing toxicity caused by pyrethroids has been confirmed in several recent ambient sample solid-phase and interstitial water TIEs (Anderson *et al.* 2006a; Anderson *et al.* 2006b, Phillips *et al.* 2006), and in the TIEs of San Mateo Creek sediment presented in this report.

3.3 SOLID-PHASE EXTRACTION COLUMN EXPERIMENTS

As discussed above, a key step in Phase II TIEs involves solvent elution of chemicals from solid-phase extraction (SPE) columns used to remove organic chemicals from sediment interstitial water. After elution, the solvent is then spiked into clean water and toxicity of this solvent eluate spike is assessed to verify that toxic concentrations of chemicals were recovered from the interstitial water. Organic chemicals are then measured in the (toxic) eluate, and specific chemicals that exceed their respective toxicity thresholds are identified. This information is then combined with other Phase I, II and III TIE results to provide a weight-of- evidence of chemicals responsible for toxicity.

A series of experiments were conducted to investigate the ability of SPEs to remove pyrethroids from interstitial water spiked with single pyrethroids, pyrethroid mixtures, and a mixture of pyrethroid and organophosphate pesticides. These experiments also investigated effectiveness of solvent elution of chemicals from SPEs.

Methods
Four batches of Salinas River reference site interstitial water were spiked separately with bifenthrin, permethrin, bifenthrin and permethrin in combination, and permethrin and chlorpyrifos in combination. Pesticide concentrations were prepared from 100 mg/L stock solutions. Bifenthrin and permethrin stocks were purchased (Accustandard, New Haven, CT), while the chlorpyrifos stock was prepared in the laboratory (10 mg chlorpyrifos in 100 mL acetone, Chem Service, West Chester, PA). Superstock solutions were diluted to 100 μg/L secondary stock solutions in methanol, and then further diluted to test concentrations using interstitial water extracted via centrifugation (2500g) from sediment collected from a reference site on the Salinas River, California (Hunt *et al.* 2003). Bifenthrin was spiked at 100 ng/L for the initial test, and 50 ng/L for subsequent tests, permethrin was spiked at 200 ng/L, and chlorpyrifos was spiked at 400 ng/L. Three solid-phase extraction (SPE) column experiments were conducted on each batch of spiked interstitial water. These experiments assessed the ability of the column to remove chemicals from the interstitial water, and to assess solvent elution of chemicals from the columns.

Oasis® HLB columns were used for all treatments (HLB = Hydrophilic-Lipophilic Balance®, 6 mL, 500 mg, Waters Corporation, Milford, MA, USA). All column treatments followed the manufacturer's suggested generic method for conditioning and loading the column. Three separate column elution methods were tested: generic method with methanol, generic method with acetone, and a serial extraction method using the standard EPA Phase II TIE suite of methanol fractions (US EPA 1991).

The column and pump apparatus was constructed by placing a column in a ring stand clamp, attaching tubing to the outlet of the column, and then passing the tubing through a peristaltic pump. Prior to attachment to the column, the tubing was cleaned by passing 10 mL 1N HCl, 25 mL Nanopure®, 25 mL methanol, and 25 mL Nanopure. After attaching tubing to the columns, they were conditioned by passing 3 mL methanol followed by 5 mL Nanopure. A separatory funnel was clamped above the column and filled with 100 mL control water. The control water was dripped into the column and pumped through at a rate of 1 mL per minute. After control water had passed through the column, 100 mL of spiked interstitial water was pumped through. Post column test concentrations were prepared by combining control and sample rinsates (rinsate = post column water). Post–column test concentrations were 0 (control), 10, 25, 50, and 100% rinsate. Columns were eluted by first washing them with 4 mL Nanopure water, followed by 4 mL solvent (methanol or acetone).

For the serial elution experiment, the column was eluted with 4 mL aliquots of methanol at the following concentrations: 25, 50, 75, 80, 85, 90, 95, and 100%. The serial elution experiments were designed to assess whether the three pesticides could be eluted from the columns in specific methanol fractions, and follows standard U.S. EPA Phase II procedures (U.S. EPA 1993).

After elution, the eluate fractions were evaporated to 1 mL using nitrogen gas under a fume hood, then the concentrated solvent was reconstituted in 100 mL control water. This reconstituted eluate was then tested with the amphipod *Hyalella azteca* in a water-only exposure. Toxicity test solvent blanks were prepared by spiking control water with highest concentrations of methanol or acetone.

Hyalella azteca were obtained from Chesapeake Cultures (Hayes, VA) 48 hours prior to test initiation. The culture was maintained at 23°C and fed YCT (US EPA 2002). Amphipods were 7-14 days old at test initiation. *H. azteca* exposures were conducted in 20 mL glass scintillation vials (3 replicates) containing 10 mL treated sample and five amphipods. Exposures were conducted for 96 hours at 23°C, following procedures described in US EPA (2002). Water quality parameters of dissolved oxygen, pH and conductivity were measured using a Hach SensION© selective ion meter with appropriate electrodes at test initiation, and temperature was measured using a continuously recording thermograph and thermometer.

Chemical analyses
Concentrations of bifenthrin and permethrin were measured in the spiked (baseline) samples and in selected treatments. Pyrethroid pesticides were measured using Gas Chromatography-Mass Spectroscopy (GC-MS; US EPA method 1660 (1993)) ECD-MS detector following methods developed by the California Department of Fish and Game Water Pollution Control Laboratory (reporting limits for bifenthrin and permethrin = 10 ng/L and 20 ng/L, respectively). Concentrations of chlorpyrifos were measured in all treatment concentrations using enzyme-linked immunosorbent assays (ELISA, Sullivan and Goh, 2000). The reporting limit for chlorpyrifos was 100 ng/L. Chemical analysis was conducted on spiked interstitial water, post-column rinsate, and eluate fractions reconstituted in clean dilution water.

Results
Results are presented as the mean survival of *H. azteca* in each TIE treatment and interstitial water concentration (Tables 3.3 to 3.9). A median lethal concentration (LC50) was calculated for each set of dose-response data, and toxic units (TU) were calculated by dividing 100 by the LC50. All column rinsate treatments are identical, but elution treatments are specific to the solvent being used to elute the column and rinsate fractions. Toxic unit results from each solid-phase extraction column test are compared and summarized in Table 3.10.

The first column experiment was conducted with interstitial water that was spiked with 100 ng/L bifenthrin. There were 13.5 TUs in the baseline treatment (Table 3.3). The columns reduced the toxicity to 6.3, 5.3 and 8.4 TUs, an approximate average reduction of 50%. Although there was incomplete removal of toxicity by the columns, the toxicity of the methanol and acetone eluates was greater than the original signal. The reason for these strong signals was most likely due to reduced survival in the eluate blanks. The serial methanol extraction returned approximately half of the toxicity in a combination of the 85 and 100% methanol fractions.

The bifenthrin experiment was repeated with a 50 ng/L spike in order to attempt complete removal of the bifenthrin. The acetone elution treatment was dropped from this experiment because it had performed as well as the methanol treatment in the previous bifenthrin experiment. The baseline sample contained 7.4 TUs (Table 3.4), and although the columns still only removed approximately half of the bifenthrin toxicity, a strong signal was returned when the methanol eluate was spiked into clean water. The serial methanol extractions demonstrated a return of toxicity in the 80, 95, and 100% fractions. These results were somewhat different from the first bifenthrin experiment (toxicity in 85 and 100% methanol fractions).

Interstitial water in both permethrin experiments was spiked with 200 ng/L. The baseline TUs for the first and second permethrin experiments were 2.5 and 2.3, respectively (Tables 3.5 and 3.6). The first HLB column in the first experiment reduced toxicity to 1.4 TU, and the methanol eluate returned 1.1 TU. The second column completely removed toxicity and the acetone eluate returned 100% of the toxicity. The third HLB column also completely removed toxicity, but the serial methanol extraction of the column only returned toxicity in the 100% fraction. Similar removal of toxicity was observed in the second permethrin experiment, but the methanol rinsate did not return toxicity and the 100% methanol fraction only returned 70% of the toxicity.

Two experiments were conducted with interstitial water spiked with a mixture of 50 ng/L bifenthrin and 200 ng/L permethrin. As before, the mixtures were extracted with three separate HLB columns, and these were subjected to either acetone or methanol elution, or to a serial extraction using increasing concentrations of methanol. Baseline interstitial water in both tests contained an average of 6.2 TU (Tables 3.7 and 3.8). There was variable reduction of toxicity by the HLB columns in these experiments. In the first mixture experiment, the three HLB columns reduced toxicity an average of 46%, whereas the columns in the second experiment only reduced toxicity by an average of 14%. Variable levels of toxicity were observed in the three solvent eluate treatments. Inconsistent results were observed when these experiments were repeated. Approximately half the toxicity was returned in the single fraction methanol or acetone eluates in the first experiment. No toxicity was observed in the methanol eluate in the second experiment. The two methanol serial elution experiments also produced variable results, and showed toxic elutions in several of the methanol fractions (Table 3.7 and 3.8).

A final experiment was conducted to assess TIE methods to separate organophosphate and pyrethroid pesticides in sediment interstitial water. For this experiment, interstitial water was spiked with 200 ng/L permethrin and 400 ng/L chlorpyrifos. This experiment used methanol to elute the HLB column, but did not include an acetone extraction of the column. Toxicity in the baseline was 3.4 TUs, and the two HLB columns reduced the toxicity to 1.9 and 2.7 TUs (Table 3.9). The methanol eluate did not return toxicity to clean dilution water, and the serial elution fractions did not return toxicity until 100% methanol was passed through the column. Chlorpyrifos concentrations were measured in the 100% concentration of every treatment. The baseline contained 451 ng/L chlorpyrifos, which was removed to below detection limits by each HLB column. The 100% methanol eluate returned 141 ng/L to clean dilution water, and the 95% methanol fraction returned 178 ng/L to clean dilution water. Although the concentrations returned in these eluate treatments were above the LC50 for *H. azteca* (86 ng/L, Phipps *et al.* 1995), significant toxicity was not observed. Previous researchers have shown that chlorpyrifos is returned in the 80 and 85% methanol fractions using a C_{18} column (Bailey *et al.* 1996). These results suggest that resins used in the HLB column react differently than those used in the C_{18} and this required a higher methanol concentration to elute chlorpyrifos.

Bifenthrin and permethrin toxicity was never completely removed by the HLB columns in these experiments. Regardless of the interstitial water spiking concentration, the proportion of pyrethroid toxicity removed by the HLB columns consistently fell within the range of 50 to 60%. Extraction of pyrethroids from interstitial water in the second pyrethroid mixture experiment was even lower (14%). Incomplete pesticide extraction (and therefore incomplete toxicity reduction) could be attributed to column breakthrough due to pesticides overwhelming the sorptive capacity of the column. Breakthrough could also be attributed to incomplete pesticide sorption due to the presence of dissolved organic material (DOM) in the interstitial water (personal communication, M. Hladic, USGS). Pyrethroids preferentially associate with DOM in water, and may in this situation not be susceptible to binding by the sorbent material in the HLB column. This would result in column breakthrough and rinsate toxicity. The concentration of DOM in the interstitial water was not measured in these experiments; therefore their role can not be defined.

An additional experiment was conducted to compare the standard 200 mg HLB columns used in the experiments described above to higher capacity 1000 mg HLB columns. This experiment was conducted to determine if increased sorbent material would increase the efficiency of pyrethroid extraction from the interstitial water. The methods for conditioning, loading and eluting the 200 mg column are described above, except that after the spiked interstitial water was loaded to the column, the column was washed with 4 mL of 5% methanol, and was then eluted by passing 4 mL 100% methanol through the column three times. The 1000 mg column was conditioned with 10 mL methanol followed by 10 mL Nanopure water. After loading with spiked interstitial water, the 1000 mg column was washed with 10 mL 5% methanol and eluted by passing 10 mL pure methanol through the column three times. Bifenthrin and permethrin were spiked individually at 50 ng/L and 200 ng/L as described above.

Baseline toxicity in the bifenthrin experiment was 16.4 TUs (Table 3.10). The 200 mg HLB column reduced toxicity to 5.5 TUs and returned 6.5 TUs, while the 1000 mg HLB column reduced toxicity to 3.4 TUs and returned 2.6 TUs. These results demonstrated that larger column was more efficient at removing toxicity, but the smaller column had better elution efficiency. The baseline toxicity in the permethrin treatment was 1.5 TUs. Both columns removed the toxicity, but the eluates failed to return toxicity. Although a larger column was used, bifenthrin still passed through the sorbent material, possibly because it was associated with DOM. Additional studies with slower pumping rates or multiple columns are necessary to determine if increased residence time with the sorbent can better extract pyrethroids from interstitial water.

Toxicity of water spiked with the HLB column solvent eluate samples was variable in these experiments. This was apparently due to incomplete elution of pyrethroids using methanol. Bifenthrin eluated from the HLB columns with 100% methanol returned toxicity greater than those of the baseline treatments, while inconsistent toxicity was observed in water spiked with the serial methanol fractions. Permethrin methanol eluations were more successful, but also demonstrated some variability. All of the permethrin toxicity that was removed by HLB columns in the first experiment was accounted for in the respective HLB column eluates. In the second permethrin experiment, approximately half of the toxicity removed by the HLB column was recovered in the methanol eluates. No permethrin toxicity was returned in water spiked with the methanol serial fractions (Table 3.10).

Methanol elution of HLB columns used to extract interstitial waters spiked with pyrethroid mixtures also resulted in incomplete recovery of pesticides. This resulted in inconsistent toxicity of water spiked with these eluates. Approximately half the toxicity was returned in the 100% solvent eluates in the first pyrethroid mixture experiment, but excessive toxicity (greater than baseline) was observed in several fractions of methanol in the serial extraction treatment. The results of the second experiment differed from the first.

No toxicity was observed in the 100% methanol fraction, and minimal toxicity was observed in the 85% fraction (Table 3.11).

Bifenthrin and permethrin were measured in selected treatments from the solid-phase extraction experiments. No permethrin was detected in any of the samples, and inconsistent concentrations of bifenthrin were detected in approximately half of the samples (Table 3.12). The lack of detectable concentrations can be attributed to small sample volume, and in the case of bifenthrin, low initial dosing concentration. In these experiments, 100 mL of interstitial water was spiked with bifenthrin, permethrin or mixtures of both, using methods that duplicated those used in the TIEs. Based on conversations with the chemistry laboratory, we concluded this would provide sufficient method detection limits for these experiments. Use of the 100 ml sample did not provide sufficient volumes to detect low concentrations of pyrethroids in these experiments, even in samples where toxicity was observed.

These results demonstrate that methanol and acetone are not appropriate solvents for eluting pyrethroid pesticides from solid-phase extraction columns. These solvents were selected for the interstitial water TIEs because of their relatively low toxicity to *Hyalella azteca* and their miscibility with water. Methanol is the solvent of choice in US EPA TIE methods, but may not be appropriate for extremely hydrophobic chemicals such as pyrethroids (Ankley *et al.* 1991; Anderson *et al.* 2006). Experiments conducted by the United State Geological Survey (USGS) also found variable elution of pyrethroids from HLB solid-phase extraction columns using methanol (personal communication, M. Hladick, USGS, Menlo Park). Their results suggested that the ethyl acetate is more appropriate for eluting pyrethroids from the HLB column, because this solvent is less polar than methanol, and therefore more efficiently solubilizes hydrophobic chemicals. Further studies are necessary to determine if ethyl acetate can be used in the TIE process. Additional studies are also needed to determine the role of DOM in column breakthrough of pyrethroids. Currently, either multiple columns or larger columns might be necessary to extract pyrethroids from interstitial water containing high concentrations of dissolved organic matter.

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Table 3.1. Toxicity Identification Evaluation (TIE) methods used to identify toxicity caused by pyrethroid pesticides in solid-phase and interstitial water.

Solid-Phase	Interstitial Water
Phase I TIE = Characterization	***Phase I TIE = Characterization***
Coconut Charcoal – Bioavailability Ambersorb #563 – Bioavailability PBO – Inhibition or synergism PBO/Carboxylesterase combo - mixtures	Solid-Phase Extraction (SPE) – Bioavailability PBO – Inhibition or synergism PBO/Carboxylesterase combo - mixtures
Phase II TIE = Identification	***Phase II TIE = Identification***
Carboxylesterase enzyme- metabolism Ambersorb elution + toxicity and chemistry HPLC Fractionation – toxicity + chemistry	Carboxylesterase enzyme - metabolism SPE column elution + toxicity and chemistry HPLC or SPE Column Fractionation – toxicity + chemistry
Phase III TIE = Confirmation	***Phase III TIE = Confirmation***
Species sensitivity	Species sensitivity

Table 3.2. Mean survival (± standard deviation) of amphipods (*Hyalella azteca*) in interstitial water spiked with the pyrethroid pesticides bifenthrin or permethrin and treated with increasing concentrations of carboxylesterase enzyme.

Enzyme concentrations are expressed as activity units 10x – 500x (after Wheelock *et al.* 2006).

	Percent Survival per Enzyme Concentration									
	0x		10x		50x		100x		500x	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Bifenthrin (ng/L)										
Lab Water										
0	100	0	93	12	93	12	73	31	100	0
20	15	13	60	20	100	0	87	12	87	23
60	0	0	0	0	13	23	7	12	7	12
100	0	0	0	0	7	12	0	0	0	0
Interstitial Water										
0	100	0	87	12	93	12	93	12	100	0
20	80	0	7	12	77	9	93	12	87	12
60	0	0	0	0	0	0	13	12	87	12
100	0	0	0	0	0	0	0	0	33	12
Permethrin (ng/L)										
Lab Water										
0	100	0	93	12	93	12	73	31	100	0
100	27	23	93	12	93	12	100	0	100	0
150	7	12	100	0	100	0	93	12	93	12
200	0	0	100	0	100	0	93	12	100	0
Interstitial Water										
0	100	0	87	12	93	12	93	12	100	0
100	7	12	67	23	100	0	100	0	100	0
150	0	0	20	20	100	0	100	0	93	12
200	0	0	7	12	100	0	100	0	87	23

Table 3.3. Mean survival of amphipods (*Hyalella azteca*) in interstitial waters spiked with bifenthrin and subjected to solid-phase extraction using HLB SPE column. Experiment #1 = bifenthrin spiked at 100 ng/L.

Results show amphipod survival after 96h in 4 different interstitial water concentrations: 10, 25, 50, and 100% IW.

	Percent Sample										
	0		10		25		50		100		Toxic
Treatment	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Units
Baseline	81	20	27	23	0	0	0	0	0	0	13.5
Methanol											
Rinsate	87	12	80	20	7	12	0	0	0	0	6.3
Eluate	57	21	0	0	0	0	0	0	0	0	20
Acetone											
Rinsate	80	0	67	12	27	12	7	12	0	0	5.3
Eluate	33	12	7	12	0	0	0	0	0	0	15.9
Serial Methanol											
Rinsate	100	00	60	35	7	12	0	0	0	0	8.4
Fraction 25	7	12	100	0	93	12	93	12	100	0	<1
Fraction 50	73	31	93	12	100	0	93	12	94	10	<1
Fraction 75	100	0	100	0	93	12	100	0	60	53	<1
Fraction 80	93	12	87	12	100	0	100	0	93	12	<1
Fraction 85	100	0	100	0	53	23	0	0	0	0	4.1
Fraction 90	100	0	73	46	100	0	93	12	100	0	<1
Fraction 95	87	12	93	12	93	12	93	12	47	12	<1
Fraction 100	87	12	100	0	100	0	93	12	40	35	1.1

SD = Standard Deviation

Table 3.4. Survival of amphipods (*Hyalella azteca*) in interstitial waters spiked with bifenthrin and subjected to solid-phase extraction using HLB SPE column. Experiment #2 = bifenthrin spiked at 50 ng/L.

Results show amphipod survival after 10d in 4 different interstitial water concentrations: 10, 25, 50, and 100% IW.

	Percent Sample										
	0		10		25		50		100		Toxic
Treatment	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Units
Baseline	74	13	47	23	20	20	0	0	0	0	7.4
Methanol											
Rinsate	87	12	0	0	62	4	13	23	0	0	3.0
Eluate	80	20	47	23	20	20	7	12	0	0	7.9
Serial Methanol											
Rinsate	87	12	67	12	67	12	13	23	0	0	2.9
Fraction 25	80	0	87	12	100	0	0	0	80	0	<1
Fraction 50	80	0	80	20	93	12	67	12	100	0	<1
Fraction 75	80	20	73	31	81	2	93	12	73	31	<1
Fraction 80	60	20	80	20	60	20	0	0	60	20	2.2
Fraction 85	80	20	81	2	34	44	60	20	47	31	<1
Fraction 90	81	2	87	23	74	13	47	42	67	12	<1
Fraction 95	93	12	73	12	47	23	40	0	0	0	3.5
Fraction 100	87	12	20	20	67	12	7	12	0	0	3.1

SD = Standard Deviation

Table 3.5. Survival of amphipods (*Hyalella azteca*) in interstitial waters spiked with permethrin and subjected to solid-phase extraction using HLB SPE column. Permethrin experiment #1 = permethrin spiked at 200 ng/L.

Results show amphipod survival after 7d in 4 different interstitial water concentrations: 10, 25, 50, and 100% IW.

	Percent Sample										
7 Day	0		10		25		50		100		Toxic
Treatment	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Units
Baseline	93	12	100	0	87	12	27	12	0	0	2.5
Methanol											
Rinsate	87	12	93	12	100	0	0	0	33	12	1.4
Eluate	87	12	93	12	87	12	88	11	40	0	1.1
Acetone											
Rinsate	100	0	67	12	67	12	93	12	60	20	<1
Eluate	94	10	71	34	80	0	33	23	7	12	2.5
Serial Methanol											
Rinsate	87	12	100	0	87	12	80	20	60	20	<1
Fraction 25	87	12	100	0	100	0	100	0	93	12	<1
Fraction 50	87	12	93	12	60	40	80	20	93	12	<1
Fraction 75	87	12	100	0	100	0	100	0	93	12	<1
Fraction 80	93	12	87	12	80	0	100	0	87	12	<1
Fraction 85	87	12	94	10	93	12	93	12	87	12	<1
Fraction 90	87	23	94	10	100	0	93	12	93	12	<1
Fraction 95	80	20	100	0	94	10	100	0	93	12	<1
Fraction 100	100	0	87	12	87	12	20	20	0	0	2.7

SD = Standard Deviation

Table 3.6. Survival of amphipods (*Hyalella azteca*) in interstitial waters spiked with permethrin and subjected to solid-phase extraction using HLB SPE column. Permethrin experiment #2 = permethrin spiked at 200 ng/L.

Results show amphipod survival after 7d in 4 different interstitial water concentrations: 10, 25, 50, and 100% IW.

	Percent Sample										
7 Day	0		10		25		50		100		Toxic
Treatment	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Units
Baseline	100	0	93	12	87	23	33	23	12	11	2.3
Methanol											
Rinsate	100	0	100	0	60	20	100	0	60	0	<1
Eluate	100	0	93	12	93	12	100	0	67	31	<1
Serial											
Methanol											
Rinsate	93	12	93	12	93	12	94	10	87	12	<1
Fraction 25	100	0	100	0	100	0	100	0	93	12	<1
Fraction 50	93	12	100	0	93	12	80	20	100	0	<1
Fraction 75	93	12	93	12	100	0	13	23	87	12	<1
Fraction 80	87	12	100	0	93	12	93	12	93	12	<1
Fraction 85	100	0	100	0	100	0	93	13	100	0	<1
Fraction 90	100	0	100	0	67	31	93	12	100	0	<1
Fraction 95	93	12	100	0	100	0	0	0	87	12	<1
Fraction 100	93	12	80	35	87	23	73	12	7	12	1.6

SD = Standard Deviation

Table 3.7. Survival of amphipods (*Hyalella azteca*) in interstitial waters spiked with a mixture of bifenthrin and permethrin and subjected to solid-phase extraction using HLB SPE column. Mixture experiment #1 = bifenthrin spiked at 50 ng/L and permethrin spiked at 200 ng/L.

Results show amphipod survival after 7d in 4 different interstitial water concentrations: 10, 25, 50, and 100% IW.

	Percent Sample										
7 Day	0		10		25		50		100		Toxic
Treatment	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Units
Baseline	100	00	87	12	20	35	00	00	00	00	6.1
Methanol											
Rinsate	100	00	93	12	73	31	07	12	00	00	3.5
Eluate	100	00	100	00	81	02	60	00	00	00	2.2
Acetone											
Rinsate	93	12	73	46	73	12	33	12	00	00	2.5
Eluate	87	12	87	23	67	31	33	31	00	00	2.6
Serial Methanol											
Rinsate	100	00	93	12	73	12	47	12	00	00	2.5
Fraction 25	87	23	100	00	93	12	100	00	100	00	<1
Fraction 50	100	00	100	00	87	12	93	12	80	20	<1
Fraction 75	93	12	87	23	93	12	87	12	40	20	1.1
Fraction 80	100	00	100	00	87	12	93	12	60	20	<1
Fraction 85	100	00	93	12	93	12	73	12	20	20	1.5
Fraction 90	100	00	100	00	93	12	73	12	27	12	1.4
Fraction 95	100	00	100	00	100	00	73	12	27	23	1.4
Fraction 100	100	00	33	23	00	00	00	00	00	00	13.3

SD = Standard Deviation

Table 3.8. Survival of amphipods (*Hyalella azteca*) in interstitial waters spiked with a mixture of bifenthrin and permethrin and subjected to solid-phase extraction using HLB SPE column. Mixture experiment #2 = bifenthrin spiked at 50 ng/L and permethrin spiked at 200 ng/L.

Results show amphipod survival after 10d in 4 different interstitial water concentrations: 10, 25, 50, and 100% IW.

	Percent Sample										
10 Day	0		10		25		50		100		Toxic
Treatment	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Units
Baseline	100	00	100	00	00	00	00	00	00	00	6.3
Methanol											
Rinsate	80	00	100	00	30	26	00	00	00	00	4.8
Eluate	87	23	93	12	93	12	93	12	47	12	<1
Serial											
Methanol											
Rinsate	100	00	87	12	20	00	00	00	00	00	6.0
Fraction 25	93	12	100	00	93	12	93	12	47	31	1.0
Fraction 50	88	11	93	12	100	00	100	00	100	00	<1
Fraction 75	80	20	53	31	53	46	93	12	100	00	<1
Fraction 80	27	31	27	31	87	12	80	35	94	10	<1
Fraction 85	100	00	100	00	93	12	60	40	00	00	2.0
Fraction 90	87	12	100	00	93	12	100	00	93	12	<1
Fraction 95	100	00	87	12	100	00	87	23	100	00	<1
Fraction 100	67	23	87	23	53	12	62	04	47	12	<1

SD = Standard Deviation

Table 3.9. Survival of amphipods (*Hyalella azteca*) in interstitial waters spiked with a mixture of bifenthrin and permethrin and subjected to solid-phase extraction using HLB SPE column. Permethrin-Chlorpyrifos mixture experiment #1 = permethrin spiked at 200 ng/L and chlorpyrifos spiked at 400 ng/L.

Results show amphipod survival after 10d in 4 different interstitial water concentrations: 10, 25, 50, and 100% IW.

	Percent Sample											
	0		10		25		50		100		Toxic	Chlorpyrifos
10 Day	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Units	ng/L
Baseline	80	20	93	12	67	31	00	00	00	00	3.4	451
Methanol												
Rinsate	93	12	93	12	87	23	60	20	00	00	1.9	ND
Eluate	93	12	80	00	94	10	73	12	73	12	<1	141
Serial												
Methanol												
Rinsate	93	12	89	19	60	20	47	12	00	00	2.7	ND
Fraction 25	80	20	93	12	100	00	93	12	87	12	<1	ND
Fraction 50	80	20	80	20	80	00	87	12	60	40	<1	ND
Fraction 75	87	12	87	12	100	00	93	12	82	17	<1	ND
Fraction 80	80	20	80	00	100	00	93	12	82	17	<1	ND
Fraction 85	87	12	100	00	87	12	87	12	60	00	<1	ND
Fraction 90	93	12	93	12	89	19	80	00	61	22	<1	ND
Fraction 95	67	23	100	00	93	12	93	12	73	12	<1	178
Fraction 100	93	12	93	12	87	23	47	42	40	35	1.7	ND

SD = Standard Deviation

Table 3.10. Mean (± SD) survival of amphipods (*Hyalella azteca*) in interstitial water spiked with bifenthrin or permethrin and subjected to solid-phase extraction with either 200 mg or 1000mg HLB SPE columns.

Treatment	Percent Sample										Toxic Units
	0		10		25		50		100		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Bifenthrin											
Baseline	73	23	13	23	6	10	0	0	0	0	16.4
200 Rinsate	80	20	73	12	10	35	0	0	0	0	5.5
200 Eluate	87	23	80	35	0	0	0	0	0	0	6.5
1000 Rinsate	87	12	73	12	62	4	6	10	0	0	3.4
1000 Eluate	93	12	87	23	80	20	27	12	0	0	2.6
Permethrin											
Baseline	87	12	94	10	93	12	67	31	20	0	1.5
200 Rinsate	88	11	93	12	87	12	100	0	93	12	<1
200 Eluate	93	12	87	12	87	12	93	12	73	23	<1
1000 Rinsate	87	12	100	0	93	12	87	12	64	34	<1
1000 Eluate	93	12	93	12	100	0	67	31	80	20	<1

Table 3.11. Toxic Unit calculations from single pyrethroid, pyrethroid mixtures, and pyrethroid-organophosphate pesticide mixture experiments.

See text for details (Results section).

Test	Bifenthrin 1	Bifenthrin 2	Permethrin 1	Permethrin 2	Bifenthrin-Permethrin 1	Bifenthrin-Permethrin 1	Permethrin-Chlorpyrifos 1
Spike	100 ng/L	50 ng/L	200 ng/L	200 ng/L	50 & 200 ng/L	50 & 200 ng/L	200 & 400 ng/L
Baseline	13.5	7.4	2.5	2.3	6.1	6.3	3.4
Methanol							
Rinsate	6.3	3.0	1.4	<1	3.5	4.8	1.9
Eluate	20	7.9	1.1	<1	2.2	<1	<1
Acetone							
Rinsate	5.3		<1		2.5		
Eluate	15.9		2.5		2.6		
Serial Methanol							
Rinsate	8.4	2.9	<1	<1	2.5	6.0	2.7
Fraction 25	<1	<1	<1	<1	<1	1.0	<1
Fraction 50	<1	<1	<1	<1	<1	<1	<1
Fraction 75	<1	<1	<1	<1	1.1	<1	<1
Fraction 80	<1	2.2	<1	<1	<1	<1	<1
Fraction 85	4.1	<1	<1	<1	1.5	2.0	<1
Fraction 90	<1	<1	<1	<1	1.4	<1	<1
Fraction 95	<1	3.5	<1	<1	1.4	<1	<1
Fraction 100	1.1	3.1	2.7	1.6	13.3	<1	1.7

Table 3.12. Nominal and measured concentrations of bifenthrin, chlorpyrifos, and permethrin in TIE experiments.

All concentrations are in ng/L. ND = not detected; NA = not analyzed.

	Bifenthrin Spike	Bifenthrin Measured	Chlorpyrifos Spike	Chlorpyrifos Measured	Permethrin Spike	Permethrin Measured	Survival (%)
BIF 2 - Baseline	50	ND					0
BIF 2 - Rinsate	50	ND					0
BIF 2 - Eluate	50	32					0
PER 2 - Baseline					200	ND	12
PER 2 - Rinsate					200	ND	53
PER 2 - Fraction 100					200	ND	0
BIF/PER 2 - Baseline	50	32			200	ND	0
BIF/PER 2 - Rinsate	50	30			200	ND	0
BIF/PER 2 - Fraction 85	50	ND			200	ND	0
BIF/PER 2 - Fraction 100	50	ND			200	ND	47
CHL/PER 1 - Baseline			400	451	200	ND	0
CHL/PER 1 - Rinsate			400	ND	200	ND	0
CHL/PER 1 - Fraction 95			400	178	200	NA	73
CHL/PER 1 - Fraction 100			400	ND	200	ND	40

APPENDIX A. FIELD SAMPLING EVENT PHOTOS (SEE CHAPTER 1)

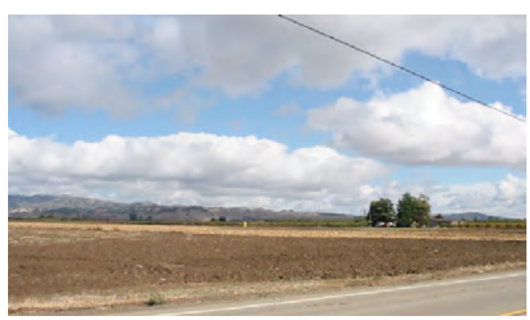
Sample Event Photos from Ambient Sediment Sampling (RMP Episodic Toxicity / PRISM Grant)

Six tributaries in the local watersheds of the San Francisco Estuary were sampled. Two stations were sampled in each tributary (an Upper-freshwater and Lower-tidal station) for two sampling events November-2004 and April-2005.

Figure A1. North San Francisco Bay tributaries sampled November-2004

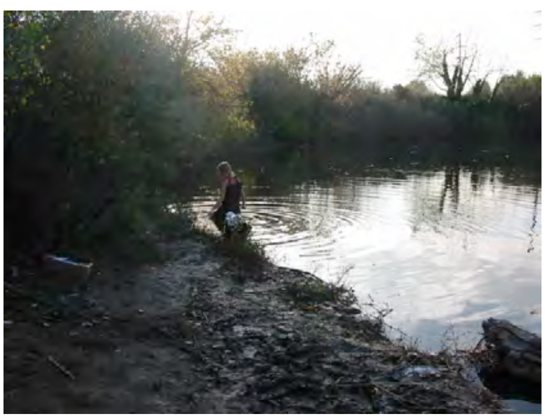
Suisun Creek Upper: (freshwater)
Rockville Rd and Willotta Dr.,
Suisun City, CA
Sampled the quieter, upstream portion of the Creek 11/3/04.

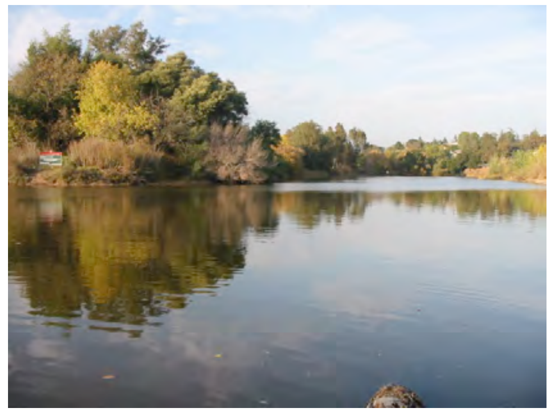
Land-use nearby



Suisun Creek Lower: (tidal)
Chadbourne Rd. past Jacksnipe Rd.,
Suisun City, CA
Sampled the downstream side of the
overpass 11/3/04.

Napa River Upper: (freshwater)
1st Street at Copia, Napa, CA
Sampled River below the Northwest corner of parking lot 11/2/04.





Napa River Lower: (tidal)
John F. Kennedy Park downstream of town, Napa, CA
Sampled off of wharf using the Eckman grab 11/2/04.

Petaluma River Upper: (freshwater/tidal)
East Washington St. & Weller, Petaluma, CA
Sampled near bank off of wharf 11/2/04.
(Salinity was ~ 15psu)

Petaluma River Lower: (tidal)
Gilardi's Lakeville Marina, Lakeville, CA
Sampled to the side of the launch ramp
11/2/04.

Figure A2. South San Francisco Bay tributaries sampled November-2004

San Lorenzo Creek Upper: (freshwater)
Via Bregani and Madeline, San Lorenzo, CA.
Sampled 11/3/04.

San Lorenzo Creek Lower: (tidal)
Via Murieta and Via Sorrento, San Lorenzo, CA.
Sampled 11/3/04.

Coyote Creek Upper: (freshwater)
Murphy Ranch Rd. and Technology Dr., Milpitas, CA.
Sampled 11/3/04. USGS gauge is a few 100 meters downstream.

Coyote Creek Lower: (tidal)
RMP station BW10, N. McCarthy Blvd./
just over the overpass heading south from
Dixon Landing Rd., Milpitas, CA
Sampled 11/1/04.

note: Paul Salop says the vegetation along the bank has changed drastically since the Estuary Interface Pilot Study. We had to sample under the bridge to get access to the sediment along the bank.

San Mateo Creek Upper: (freshwater) in Gateway Park, 3rd Ave, San Mateo, CA.
Sampled 11/4/04.

This is also a SWAMP station. Sampled mud off the step since sediments in the creek were sand/gravel. A city maintenance worker told us that the creek had recently risen above the steps.

San Mateo Creek Lower: (tidal) 3rd Ave. and J. Hart Clinton Drive, San Mateo, CA
Sampled 11/4/04.

Sampled under the overpass on the upstream side of the road.

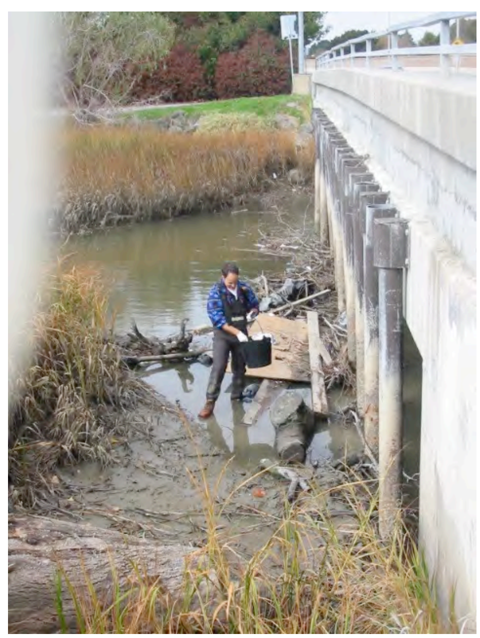
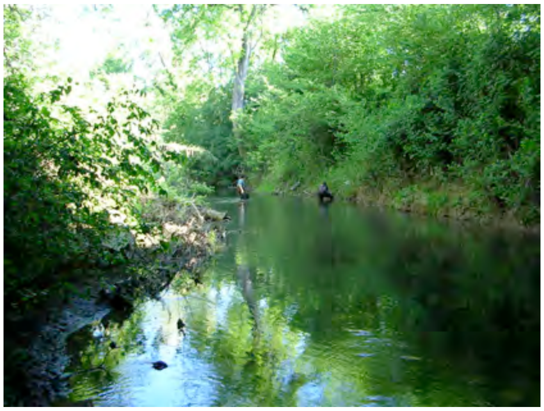
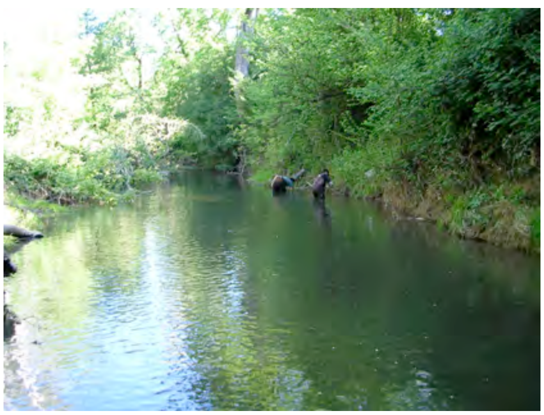


Figure A3. North San Francisco Bay tributaries sampled April-2005

Suisun Creek Upper: (freshwater)
Rockville Rd and Willotta Dr.,
Suisun City, CA
Sampled the quieter, upstream portion of the Creek.



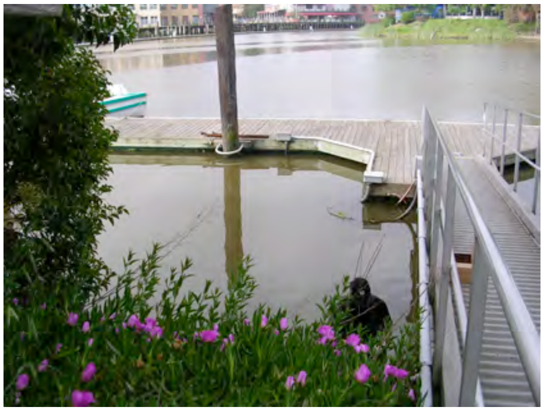


Suisun Creek Lower: (tidal)
Chadbourne Rd. past Jacksnipe Rd.
Sampled the downstream side of the overpass.

Napa River Upper: (freshwater)
1st Street at Copia. Sampled River below the Northwest corner of parking lot.

Napa River Lower: (tidal)
John F. Kennedy Park downstream of town. Sampled off of wharf.

Petaluma River Upper: (fresh/tidal)
East Washington St. & Weller



Petaluma River Lower: (tidal)
Gilardi's Lakeville Marina

Figure A4. South San Francisco Bay tributaries sampled April-2005

San Lorenzo Creek Upper: (fresh)
(Via Bregani / Madeline)

San Lorenzo Creek Lower: (tidal)
(Via Murieta / Via Sorrento)

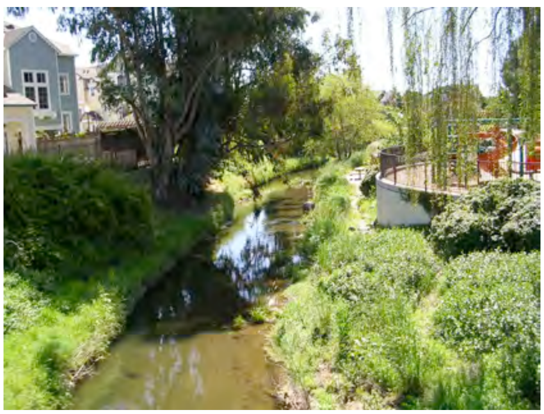
Coyote Creek Upper: (freshwater)
(Murphy Ranch Rd./ Technology Dr.
Milpitas, CA)

Sampled several locations along creek bank.

Coyote Creek Lower: (tidal)
(RMP station BW10, N. McCarthy Blvd./
just over the overpass heading south from
Dixon Landing Rd., Milpitas, CA)

Sampled under the overpass

San Mateo Creek Upper: (freshwater)
(Gateway Park, 3rd Ave)



San Mateo Creek Lower: (tidal)
(3rd Ave. and J Hart Clinton Drive)

Sampled submerged sediments right next to the creek overpass.

APPENDIX B. FIELD SAMPLE SEDIMENT CHEMISTRY - QA REVIEW (SEE CHAPTER 1)

PRISM 2004-2005 Sediment Chemistry - QA Review

Data quality was evaluated by reviewing laboratory data submissions against the data quality objectives outlined by the project's QAPP. Five QA/QC elements were evaluated: Completeness, Sensitivity, Blank contamination, Accuracy, and Precision. These elements were evaluated for all QA samples provided by each laboratory for each sampling event (November – 2004 or April – 2005), except for the Blank contamination review, which was evaluated for each reported laboratory batch. This project's Data Quality Objectives (DQOs) follow the PRISM QAPP guidelines and are at least as conservative as SWAMP's DQOs. All data that were qualified with a QACode that contained "VRxxx" were considered to be outside acceptable QA standards and were dropped from any subsequent data analysis.

Sensitivity (Method Detection Limits)

Sensitivity evaluates if the analytical methods used were sensitive enough to measure targeted contaminants at levels found in the environment sampled. Analytical sensitivity was evaluated for each parameter group (RGROUP) by calculating the average percentage of field samples (and lab replicates) that were reported to be below the method detection limits (results that were qualified as non-detect (ND)).

The average percentage of samples with non-detect results for each sampling event are listed below and show that method sensitivity was similar between events, or improved in the later event. Avg of xMDL =Average(Result/MDL) and provides a sense of how much higher the field sample results were than the detection limit for each parameter group.

Parameter groups that had more than 70 percent of the results reported as non-detects include PBDEs, HCHs, Cyclopentadienes, 04OTHER (Endosulfans), 05OTHER (Diazinon, Chlorpyrifos, Hexachlorobenzene, and Mirex), and Pyrethroids.

Paramter Group	Type	RGROUP	Cruise Number	Number Of Analytes in RGROUP	Avg percent of samples reporting ND results	Avg Of xMDL[2] all analytes in RGROUP
ORG	PAH	1LPAH	2004-11	16	23.21	12.61
ORG	PAH	1LPAH	2005-04	16	26.28	6.88
ORG	PAH	2HPAH	2004-11	13	12.50	81.38
ORG	PAH	2HPAH	2005-04	13	7.69	52.27
ORG	PBDE	PBDE	2004-11	12	82.29	0.47
ORG	PBDE	PBDE	2005-04	12	78.85	0.73
ORG	PCB	PCB	2004-11	51	63.72	1.67
ORG	PCB	PCB	2005-04	51	62.69	1.73
ORG	PEST	1DDT	2004-11	6	62.50	2.99
ORG	PEST	1DDT	2005-04	6	66.15	1.76
ORG	PEST	2CHLR	2004-11	7	53.57	2.29
ORG	PEST	2CHLR	2005-04	7	62.64	1.45
ORG	PEST	3HCH	2004-11	4	100.00	0.00
ORG	PEST	3HCH	2005-04	4	100.00	0.00
ORG	PEST	4CYCPENT	2004-11	3	75.00	0.81
ORG	PEST	4CYCPENT	2005-04	3	84.62	0.29
ORG	PEST	4Other	2004-11	3	100.00	0.00
ORG	PEST	4Other	2005-04	3	100.00	0.00

[2] Avg Of xMDL = average of (field sample result/MDL value for each analyte reported for all samples within a targeted RGROUP). This indicates, on average, how many times greater the field sample results were than the reported method detection limits for a given parameter group.

Paramter Group	Type	RGROUP	Cruise Number	Number Of Analytes in RGROUP	Avg percent of samples reporting ND results	Avg Of xMDL[2] all analytes in RGROUP
ORG	PEST	5Other	2004-11	8	71.88	0.89
ORG	PEST	5Other	2005-04	7	91.12	0.54
ORG	PEST	6PYRETH	2004-11	15	91.96	0.45
ORG	PEST	6PYRETH	2005-04	15	97.44	0.05
ORG1	PAH ALKYLATED		2004-11	18	12.50	33.48
ORG1	PAH ALKYLATED		2005-04	18	10.77	17.55
TE	TE	TE	2004-11	14	0	na
TE	TE	TE	2005-04	13	6.25	na

Blank Contamination (laboratory blank evaluation)

Blank contamination (BC) review was performed on laboratory blanks within each laboratory batch. If the field sample results were not blank corrected then the average Blank results were evaluated against the average reported Blank MDLs. If the field sample results were Blank corrected (average Blank concentration subtracted from the field sample result) then the average standard deviation of the blanks were evaluated against the average reported Blank MDLs.

Results indicated that the following laboratory batches exhibited some contamination in the Blank samples. Field samples (FS), and associated QA samples (with the exception of blank samples), were qualified with the following blank contamination qualifiers: VIP (if Result>AveBlank) or VRIP (if Result>3*AveBlank).

TYPE	RGROUP	Analyte	Lab Batch	Cruise Number	NumOf SFEI result	Were FS Blank Corrected?
ORG	2HPAH	Benzo(ghi)perylene	WPCL_L-211-05_S_PAH	2005-04	13	No
ORG	PCB	Aroclor 1260	WPCL_L-211-05_BS375_KR_S_PCB	2005-04	12	No
ORG	PCB	PCB 018	WPCL_L-211-05_BS375_KR_S_PCB	2005-04	12	No
ORG	PCB	PCB 028	WPCL_L-192-05_BS373_KR_S_PCB	2005-04	3	No
ORG	PCB	PCB 028	WPCL_L-211-05_BS375_KR_S_PCB	2005-04	12	No
ORG	PCB	PCB 031	WPCL_L-211-05_BS375_KR_S_PCB	2005-04	12	No
ORG	PCB	PCB 033	WPCL_L-192-05_BS373_KR_S_PCB	2005-04	3	No
ORG	PCB	PCB 044	WPCL_L-211-05_BS375_KR_S_PCB	2005-04	12	No
ORG	PCB	PCB 052	WPCL_L-192-05_BS373_KR_S_PCB	2005-04	3	No
ORG	PCB	PCB 052	WPCL_L-211-05_BS375_KR_S_PCB	2005-04	12	No
ORG	PCB	PCB 066	WPCL_L-192-05_BS373_KR_S_PCB	2005-04	3	No
ORG	PCB	PCB 066	WPCL_L-211-05_BS375_KR_S_PCB	2005-04	12	No
ORG	PCB	PCB 070	WPCL_L-211-05_BS375_KR_S_PCB	2005-04	12	No
ORG	PCB	PCB 095	WPCL_L-192-05_BS373_KR_S_PCB	2005-04	3	No
ORG	PCB	PCB 095	WPCL_L-211-05_BS375_KR_S_PCB	2005-04	12	No
ORG	PCB	PCB 101	WPCL_L-192-05_BS373_KR_S_PCB	2005-04	3	No
ORG	PCB	PCB 101	WPCL_L-211-05_BS375_KR_S_PCB	2005-04	12	No
ORG	PCB	PCB 110	WPCL_L-192-05_BS373_KR_S_PCB	2005-04	3	No
ORG	PCB	PCB 110	WPCL_L-211-05_BS375_KR_S_PCB	2005-04	12	No
ORG	PCB	PCB 118	WPCL_L-192-05_BS373_KR_S_PCB	2005-04	3	No
ORG	PCB	PCB 118	WPCL_L-211-05_BS375_KR_S_PCB	2005-04	12	No
ORG	PCB	PCB 138	WPCL_L-192-05_BS373_KR_S_PCB	2005-04	3	No
ORG	PCB	PCB 138	WPCL_L-211-05_BS375_KR_S_PCB	2005-04	12	No
TE	TE	Cu	05-0278	2005-04	8	Yes
TE	TE	Mn	05-0278	2005-04	8	Yes

Accuracy Review

Accuracy was evaluated based on reported Certified Reference Material (CRM) results or Matrix Spike (MS) results. Average percent error from certified (or spiked) target values were evaluated for several different Sample Types (CRM, LCM-Lab Control Material, LCS-Lab Control Spike, and MS) and average percent error for all Sample Types Avg % Error are reported here. Final QA Codes were assigned based preferentially on % Error of the CRM and MS samples. % error from other sample types reported here are informational only.

DQOs for organics are VRIU if Avg%Error > 70, VIU if Avg%Error > 35; for trace elements VRIU if Avg%Error > 50, VIU if Avg%Error > 25

CRUISE	RGROUP	Analyte	CRM	LCM	LCS	MS	Avg % Error	Final QA Code
2004-11	1DDT	o,p'-DDT			10	18.5	14.3	
2004-11	1DDT	p,p'-DDT	85.7		7.5	30.4		VRIU
2004-11	1LPAH	1-Methylfluorene			29	49.6	39.3	VIU
2004-11	1LPAH	2,3,5-Trimethylnaphthalene			26	96.1	61.1	VIU
2004-11	1LPAH	2,6-Dimethylnaphthalene			0	10.3	5.14	
2004-11	1LPAH	3,6-Dimethylphenanthrene			6	18.5	12.2	
2004-11	1LPAH	4-Methyldibenzothiophene			2	1.89	1.95	
2004-11	1LPAH	Acenaphthylene			7	9.37	8.18	
2004-11	2CHLR	alpha-Chlordane	79.3		6	5.1		VRIU
2004-11	2CHLR	cis-Nonachlor	48.9		5.6	5.46		VIU
2004-11	2CHLR	gamma-Chlordane	253		0.9	2.89		VRIU
2004-11	2CHLR	Heptachlor			52.6	47.4	50	VIU
2004-11	2CHLR	Heptachlor Epoxide			30.6	33.4	32	
2004-11	2CHLR	Oxychlordane			1	6.58	3.79	
2004-11	2CHLR	trans-Nonachlor	52.4		1	1.05		VIU
2004-11	2HPAH	2-Methylfluoranthene			5	7.33	6.17	
2004-11	2HPAH	Dibenz(a,h)anthracene			7	15.9	11.4	
2004-11	3HCH	alpha-HCH			3	2.41	2.71	
2004-11	3HCH	beta-HCH			1	2.8	1.9	
2004-11	3HCH	gamma-HCH			13.2	8.06	10.6	
2004-11	4CYCPENT	Aldrin			4.2	1.38	2.79	
2004-11	4CYCPENT	Dieldrin			15.2	30.9	23.1	
2004-11	4CYCPENT	Endrin			36	52.4	44.2	VIU
2004-11	4Other	Endosulfan I			1.5	4.18	2.84	
2004-11	4Other	Endosulfan II			4.5	3.68	4.09	
2004-11	4Other	Endosulfan Sulfate			2.5	2.23	2.36	
2004-11	5Other	Chlorpyrifos			31	38.8	34.9	
2004-11	5Other	Chlorpyrifos		35				
2004-11	5Other	Diazinon			4.5	5.82	5.16	
2004-11	5Other	Diazinon		40.6				
2004-11	5Other	Mirex			8.33	10.6	9.46	

CRUISE	RGROUP	Analyte	CRM	LCM	LCS	MS	Avg % Error	Final QA Code
2004-11	5Other	Oxadiazon			18	9.65	13.8	
2004-11	6PYRETH	Bifenthrin			9	7	8	
2004-11	6PYRETH	Cyfluthrin (isomer-1)			15.2	9.4	12.3	
2004-11	6PYRETH	Cyfluthrin (isomer-2)			24.4	21.6	23	
2004-11	6PYRETH	Cyfluthrin (isomer-3)			25.2	26.8	26	
2004-11	6PYRETH	Cyfluthrin (isomer-4)			21.6	20.4	21	
2004-11	6PYRETH	Cypermethrin (isomer-1)			7.2	18.4	12.8	
2004-11	6PYRETH	Cypermethrin (isomer-2)			8	10	9	
2004-11	6PYRETH	Cypermethrin (isomer-3)			8	15	11.5	
2004-11	6PYRETH	Cypermethrin (isomer-4)			12	10	11	
2004-11	6PYRETH	Esfenvalerate (isomer-1)			10	8	9	
2004-11	6PYRETH	Esfenvalerate (isomer-2)			10	15	12.5	
2004-11	6PYRETH	Lambda-cyhalothrin (isomer-1)			15	25	20	
2004-11	6PYRETH	Lambda-cyhalothrin (isomer-2)			28	1.5	14.8	
2004-11	6PYRETH	Permethrin (isomer-1)			20	8	14	
2004-11	6PYRETH	Permethrin (isomer-2)			20	18	19	
2004-11	PBDE	BDE 017			0.4	9.65	5.03	
2004-11	PBDE	BDE 028			4.2	14.8	9.52	
2004-11	PBDE	BDE 047			0.4	16	8.18	
2004-11	PBDE	BDE 066			7.2	17	12.1	
2004-11	PBDE	BDE 085			1	6.3	3.65	
2004-11	PBDE	BDE 099			0.8	10.5	5.64	
2004-11	PBDE	BDE 100			0.2	11.4	5.82	
2004-11	PBDE	BDE 138			2.8	2.88	2.84	
2004-11	PBDE	BDE 153			0.2	13	6.58	
2004-11	PBDE	BDE 154			3.6	9.28	6.44	
2004-11	PBDE	BDE 183			11.6	5.82	8.71	
2004-11	PBDE	BDE 190			3	7.51	5.25	
2004-11	PCB	PCB 008	85.8		17.6	8.73		VRIU
2004-11	PCB	PCB 027			8.8	8.61	8.7	
2004-11	PCB	PCB 029			15.8	11.1	13.5	
2004-11	PCB	PCB 033			1	2.95	1.97	
2004-11	PCB	PCB 056			11	12.7	11.9	
2004-11	PCB	PCB 060			15.2	18.6	16.9	
2004-11	PCB	PCB 070			5.2	14.3	9.73	
2004-11	PCB	PCB 074			25.2	7.46	16.3	
2004-11	PCB	PCB 097			0.2	8.3	4.25	
2004-11	PCB	PCB 110	64.6		450	268		VIU

CRUISE	RGROUP	Analyte	CRM	LCM	LCS	MS	Avg % Error	Final QA Code
2004-11	PCB	PCB 114			6.8	8.12	7.46	
2004-11	PCB	PCB 137			6.4	7.69	7.04	
2004-11	PCB	PCB 141			1.2	4.39	2.8	
2004-11	PCB	PCB 157			3.6	4.88	4.24	
2004-11	PCB	PCB 158			3.2	9.03	6.11	
2004-11	PCB	PCB 174			2.2	5.02	3.61	
2004-11	PCB	PCB 177			0.2	3.63	1.91	
2004-11	PCB	PCB 189			0.4	1.3	0.85	
2004-11	PCB	PCB 200			1.8	1.11	1.45	
2004-11	PCB	PCB 201			2.2	3.3	2.75	
2004-11	PCB	PCB 203			4.6	6.2	5.4	
2004-11	TE	Se	42.5			4.57		VIU
2004-11		C1-Dibenzothiophenes			3	2.52	2.76	
2004-11		C1-Fluoranthenes_Pyrenes			5	1.58	3.29	
2004-11		C1-Fluorenes			28	40.2	34.1	
2004-11		C1-Naphthalenes			4.5	165	85	VRIU
2004-11		C1-Phenanthrenes_Anthracenes			0	3.99	2	
2004-11		C2-Naphthalenes			1	31.5	16.2	
2004-11		C2-Phenanthrenes_Anthracenes			35	4.63	19.8	
2004-11		C3-Naphthalenes			25	77.2	51.1	VIU
2005-04	1DDT	o,p'-DDE	40.5		13.8	14.6		VIU
2005-04	1DDT	o,p'-DDT			14	16.5	15.2	
2005-04	1DDT	p,p'-DDT	71.4		6.5	38.9		VRIU
2005-04	1LPAH	1-Methylfluorene			32	25.7	28.8	
2005-04	1LPAH	2,3,5-Trimethylnaphthalene			33	33.3	33.2	
2005-04	1LPAH	2,6-Dimethylnaphthalene			7	9.02	8.01	
2005-04	1LPAH	3,6-Dimethylphenanthrene			18	32.4	25.2	
2005-04	1LPAH	4-Methyldibenzothiophene			10	11.7	10.9	
2005-04	1LPAH	Acenaphthene	51.8		5	8.16		VIU
2005-04	1LPAH	Acenaphthylene			10	3.82	6.91	
2005-04	1LPAH	Biphenyl	41.6		4	1.29		VIU
2005-04	1LPAH	Fluorene	49.5		20	10.2		VIU
2005-04	2CHLR	alpha-Chlordane	49.6		11.5	14		VIU
2005-04	2CHLR	gamma-Chlordane	195		8.5	6.56		VRIU
2005-04	2CHLR	Heptachlor			25.6	22.1	23.9	
2005-04	2CHLR	Heptachlor Epoxide			3	3.86	3.43	
2005-04	2CHLR	Oxychlordane			7	8.28	7.64	

CRUISE	RGROUP	Analyte	CRM	LCM	LCS	MS	Avg % Error	Final QA Code
2005-04	2HPAH	2-Methylfluoranthene			13	17.6	15.3	
2005-04	2HPAH	Dibenz(a,h)anthracene			39	40.3	39.7	VIU
2005-04	2HPAH	Perylene	38.8		2.3	11.3		VIU
2005-04	3HCH	alpha-HCH			11.5	15.9	13.7	
2005-04	3HCH	beta-HCH			8	13.3	10.6	
2005-04	3HCH	delta-HCH			89.4		89.4	VRIU
2005-04	3HCH	gamma-HCH			9.4	13	11.2	
2005-04	4CYCPENT	Aldrin			21	14.7	17.8	
2005-04	4CYCPENT	Dieldrin			12	28	20	
2005-04	4CYCPENT	Endrin			113	96.7	105	VRIU
2005-04	4Other	Endosulfan I			24.5	7.8	16.2	
2005-04	4Other	Endosulfan II			5.5	10.4	7.94	
2005-04	4Other	Endosulfan Sulfate			14.8	8.68	11.7	
2005-04	5Other	Chlorpyrifos			31.7	8.46	20.1	
2005-04	5Other	Chlorpyrifos		18				
2005-04	5Other	Diazinon			4.5	13.5	9.01	
2005-04	5Other	Diazinon		18				
2005-04	5Other	Mirex			3.67	5.75	4.71	
2005-04	5Other	Oxadiazon			24	13	18.5	
2005-04	6PYRETH	Bifenthrin			15.2	12.2	13.7	
2005-04	6PYRETH	Cyfluthrin (isomer-1)			3	20.3	11.6	
2005-04	6PYRETH	Cyfluthrin (isomer-2)			6.2	17.5	11.9	
2005-04	6PYRETH	Cyfluthrin (isomer-3)			3.8	17	10.4	
2005-04	6PYRETH	Cyfluthrin (isomer-4)			14.1	4.5	9.3	
2005-04	6PYRETH	Cypermethrin (isomer-1)			0.5	12	6.25	
2005-04	6PYRETH	Cypermethrin (isomer-2)			0	5.5	2.75	
2005-04	6PYRETH	Cypermethrin (isomer-3)			5.8	16.8	11.3	
2005-04	6PYRETH	Cypermethrin (isomer-4)			11.1	4	7.55	
2005-04	6PYRETH	Esfenvalerate (isomer-1)			5.5	4	4.75	
2005-04	6PYRETH	Esfenvalerate (isomer-2)			7	3	5	
2005-04	6PYRETH	Lambda-cyhalothrin (isomer-1)			3	19.5	11.3	
2005-04	6PYRETH	Lambda-cyhalothrin (isomer-2)			6	11.5	8.75	
2005-04	6PYRETH	Permethrin (isomer-1)			8.6	17.3	13	
2005-04	6PYRETH	Permethrin (isomer-2)			10.2	9.7	9.95	
2005-04	PBDE	BDE 017			3.2	21.2	12.2	
2005-04	PBDE	BDE 028			14.4	19.6	17	
2005-04	PBDE	BDE 047			1.4	82.1	41.8	VIU
2005-04	PBDE	BDE 066			2.2	18.1	10.1	
2005-04	PBDE	BDE 085			6.2	17.6	11.9	
2005-04	PBDE	BDE 099			2.2	106	54	VIU

CRUISE	RGROUP	Analyte	CRM	LCM	LCS	MS	Avg % Error	Final QA Code
2005-04	PBDE	BDE 100			2.8	22	12.4	
2005-04	PBDE	BDE 138			7.4	15.7	11.5	
2005-04	PBDE	BDE 153			4.6	20	12.3	
2005-04	PBDE	BDE 154			3	17.9	10.4	
2005-04	PBDE	BDE 183			2.8	16.8	9.8	
2005-04	PBDE	BDE 190			16.8	19.3	18	
2005-04	PCB	PCB 008	55.9		25.6	20.5		VIU
2005-04	PCB	PCB 027			19.1	29.5	24.3	
2005-04	PCB	PCB 029			7.8	23	15.4	
2005-04	PCB	PCB 033			18	15.2	16.6	
2005-04	PCB	PCB 056			23.5	20.1	21.8	
2005-04	PCB	PCB 060			7.6	13.3	10.4	
2005-04	PCB	PCB 070			27.7	14.8	21.3	
2005-04	PCB	PCB 074			12.1	20.8	16.5	
2005-04	PCB	PCB 097			12.9	4.58	8.74	
2005-04	PCB	PCB 114			7.4	8.57	7.98	
2005-04	PCB	PCB 137			15.3	14.1	14.7	
2005-04	PCB	PCB 141			8.5	4.78	6.64	
2005-04	PCB	PCB 157			16.4	9.39	12.9	
2005-04	PCB	PCB 158			8.9	9.29	9.09	
2005-04	PCB	PCB 174			9.6	4.56	7.08	
2005-04	PCB	PCB 177			5.9	4.35	5.12	
2005-04	PCB	PCB 189			24.3	25.4	24.9	
2005-04	PCB	PCB 200			9.8	7.9	8.85	
2005-04	PCB	PCB 201			7.7	6.35	7.03	
2005-04	PCB	PCB 203			15.2	14.5	14.9	
2005-04	TE	Cd	70.6			22		VRIU
2005-04		C1-Dibenzothiophenes			10	10.1	10	
2005-04		C1-Fluoranthenes_Pyrenes			13	35.8	24.4	
2005-04		C1-Fluorenes			33	23.5	28.2	
2005-04		C1-Naphthalenes			13.5	12.9	13.2	
2005-04		C1-Phenanthrenes_Anthracenes			12	23.2	17.6	
2005-04		C2-Naphthalenes			17	17.9	17.5	
2005-04		C2-Phenanthrenes_Anthracenes			11	17.3	14.2	
2005-04		C3-Naphthalenes			38	56.2	47.1	VIU

Precision Review

Evaluate Relative Standard Deviation (RSD) of replicate samples in a data submission (in this case by seasonal sampling event). First evaluate replicate field samples and lab replicates. If they are not available use reference material replicates. Precision is evaluated for those parameters whose AvgResult is >3*AvgMDL. This includes any non-detect (ND) results (set result to "0"), and any individual results that may be <3*MDL (as long as the sampling event overall average Result is > 3*AvgMDL).

DQOs for organics are VRIL if AvgRSD > 70, VIL if AvgRSD > 35; for trace elements VRIL if AvgRSD > 50, VIL if AvgRSD > 25

ProjectID	RGROUP	Analyte	Avg RSD	Num RSD Results	Units	Add QA Code	Avg SFEI Result	Avg StDev Of SFEIResult	Min Of xMDL[3]	Avg MDL
04ETP2TX	1LPAH	1-Methylnaphthalene	38	2	ug/kg	VIL	4.21	1.6122035	5	0.9
04ETP2TX	1LPAH	1-Methylphenanthrene	15	2	ug/kg		5.795	0.8838835	6	0.9
04ETP2TX	1LPAH	2,3,5-Trimethylnaphthalene	31	2	ug/kg		3.945	1.2232947	4	0.9
04ETP2TX	1LPAH	2,6-Dimethylnaphthalene	7	2	ug/kg		3.99	0.2687006	4	0.9
04ETP2TX	1LPAH	2-Methylnaphthalene	26	2	ug/kg		6.545	1.7182695	7	0.9
04ETP2TX	1LPAH	3,6-Dimethylphenanthrene	3	2	ug/kg		3.085	0.0777817	3	0.9
04ETP2TX	1LPAH	Anthracene	6	2	ug/kg		6.395	0.3606245	7	0.9
04ETP2TX	1LPAH	Dibenzothiophene	2	2	ug/kg		3.105	0.0636396	3	0.9
04ETP2TX	1LPAH	Fluorene	8	2	ug/kg		4.795	0.3889087	5	0.9
04ETP2TX	1LPAH	Naphthalene	20	2	ug/kg		6.56	1.3293607	7	0.9
04ETP2TX	1LPAH	Phenanthrene	4	2	ug/kg		33.5	1.4142136	37	0.9
04ETP2TX	2HPAH	2-Methylfluoranthene	19	2	ug/kg		9.55	1.767767	11	0.9
04ETP2TX	2HPAH	Benz(a)anthracene	17	2	ug/kg		25.4	4.2426407	28	0.9
04ETP2TX	2HPAH	Benzo(a)pyrene	18	2	ug/kg		30.6	5.5154329	34	0.9
04ETP2TX	2HPAH	Benzo(b)fluoranthene	12	2	ug/kg		59.25	7.2831998	66	0.9
04ETP2TX	2HPAH	Benzo(e)pyrene	9	2	ug/kg		33.4	3.1112698	37	0.9
04ETP2TX	2HPAH	Benzo(ghi)perylene	9	2	ug/kg		36.55	3.3234019	41	0.9
04ETP2TX	2HPAH	Benzo(k)fluoranthene	10	2	ug/kg		21.75	2.192031	24	0.9
04ETP2TX	2HPAH	Chrysene	29	2	ug/kg		48	13.859293	53	0.9
04ETP2TX	2HPAH	Dibenz(a,h)anthracene	18	2	ug/kg		9.34	1.6404877	10	0.9
04ETP2TX	2HPAH	Fluoranthene	6	2	ug/kg		113	7.0710678	126	0.9
04ETP2TX	2HPAH	Indeno(1,2,3-cd)pyrene	14	2	ug/kg		31.7	4.5254834	35	0.9
04ETP2TX	2HPAH	Perylene	5	2	ug/kg		18	0.9899495	20	0.9
04ETP2TX	2HPAH	Pyrene	7	2	ug/kg		95.35	6.2932504	106	0.9
04ETP2TX	PCB	PCB 052	30	2	ug/kg		0.617	0.1880904	3	0.1805
04ETP2TX	PCB	PCB 070	52	2	ug/kg	VIL	0.575	0.2983991	3	0.1805
04ETP2TX	PCB	PCB 087	17	2	ug/kg		0.564	0.0947523	3	0.1805
04ETP2TX	PCB	PCB 101	30	2	ug/kg		0.8425	0.2510229	5	0.1805
04ETP2TX	PCB	PCB 110	57	2	ug/kg	VIL	0.6865	0.3882016	4	0.1805
04ETP2TX	PCB	PCB 118	49	2	ug/kg	VIL	0.9205	0.4518412	5	0.1805
04ETP2TX	PCB	PCB 138	23	2	ug/kg		0.996	0.231931	6	0.1805

[3] Min Of xMDL = Minimum field sample result/MDL value (indicates how many time greater the lowest field sample result was than the reported method detection limit).

ProjectID	RGROUP	Analyte	Avg RSD	Num RSD Results	Units	Add QA Code	Avg SFEI Result	Avg StDev Of SFEIResult	Min Of xMDL	Avg MDL
04ETP2TX	PCB	PCB 149	19	2	ug/kg		0.6	0.1159655	3	0.1805
04ETP2TX	PCB	PCB 153	12	2	ug/kg		0.676	0.0806102	4	0.1805
04ETP2TX		C1-Chrysenes	8	2	ug/kg		20.75	1.6263456	23	0.9
04ETP2TX		C1-Dibenzothiophenes	9	2	ug/kg		5.21	0.4808326	6	0.9
04ETP2TX		C1-Fluoranthenes_Pyrenes	16	2	ug/kg		79	13.010765	88	0.9
04ETP2TX		C1-Fluorenes	12	2	ug/kg		5.315	0.629325	6	0.9
04ETP2TX		C1-Naphthalenes	30	2	ug/kg		10.875	3.2880465	12	0.9
04ETP2TX		C1-Phenanthrenes_Anthracenes	13	2	ug/kg		27	3.5355339	30	0.9
04ETP2TX		C2-Chrysenes	3	2	ug/kg		18.7	0.5656854	21	0.9
04ETP2TX		C2-Dibenzothiophenes	18	2	ug/kg		9.25	1.6263456	10	0.9
04ETP2TX		C2-Fluorenes	4	2	ug/kg		6.28	0.2545584	7	0.9
04ETP2TX		C2-Naphthalenes	17	2	ug/kg		13.25	2.192031	15	0.9
04ETP2TX		C2-Phenanthrenes_Anthracenes	20	2	ug/kg		36.7	7.4953319	41	0.9
04ETP2TX		C3-Chrysenes	1	2	ug/kg		14	0.1414214	16	0.9
04ETP2TX		C3-Dibenzothiophenes	7	2	ug/kg		6.815	0.4454773	8	0.9
04ETP2TX		C3-Fluorenes	0	2	ug/kg		5.855	0.0070711	7	0.9
04ETP2TX		C3-Naphthalenes	18	2	ug/kg		13.45	2.4748737	15	0.9
04ETP2TX		C3-Phenanthrenes_Anthracenes	20	2	ug/kg		20.95	4.17193	23	0.9
04ETP2TX		C4-Naphthalenes	14	2	ug/kg		6.09	0.8626703	7	0.9
04ETP2TX		C4-Phenanthrenes_Anthracenes	19	2	ug/kg		5.55	1.0323759	6	0.9
04ETP2TX	AGS	% Clay (<4um)	3	3	%		21.48318	0.6459367	242	0.088831
04ETP2TX	AGS	% Sand (63um-2mm)	2	3	%		58.94485	1.2965474	54	1.090111
04ETP2TX	AGS	% Silt (4um-63um)	9	3	%		19.57197	1.8174114	17	1.173068
04ETP2TX	ANC	TOC	4	3	%		1.144333	0.040501	67	0.017
04ETP2TX	ANC	Total Nitrogen	5	3	%		0.1	0.0051962	100	0.001
04ETP2TX	ANC	% Solids - SED-TE-BRL-TE2	0	2	%		70.08	0.0565685	1168	0.06
04ETP2TX	TE	Al	22	3	mg/kg		42260.42	9191.8443	30186	1.4
04ETP2TX	TE	As	12	4	mg/kg		5.0675	0.6328606	28	0.1
04ETP2TX	TE	Se	4	4	mg/kg		0.2225	0.0091924	32	0.002
05ETP2TX	1DDT	p,p'-DDE	9	2	ug/kg		6.615	0.5868986	9	0.76
05ETP2TX	1LPAH	1-Methylfluorene	11	2	ug/kg		2.695	0.2899138	4	0.6645
05ETP2TX	1LPAH	1-Methylnaphthalene	21	2	ug/kg		3.91	0.8061017	6	0.6645
05ETP2TX	1LPAH	1-Methylphenanthrene	6	2	ug/kg		3.9	0.2262742	6	0.6645
05ETP2TX	1LPAH	2,6-Dimethylnaphthalene	11	2	ug/kg		4.325	0.4737615	7	0.6645
05ETP2TX	1LPAH	2-Methylnaphthalene	19	2	ug/kg		8.655	1.6758431	13	0.6645
05ETP2TX	1LPAH	3,6-Dimethylphenanthrene	4	2	ug/kg		2.24	0.0989949	3	0.6645
05ETP2TX	1LPAH	4-Methyldibenzothiophene	4	2	ug/kg		2.085	0.0777817	3	0.6645
05ETP2TX	1LPAH	Anthracene	21	2	ug/kg		2.135	0.4454773	3	0.6645
05ETP2TX	1LPAH	Biphenyl	10	2	ug/kg		3.785	0.3747666	6	0.6645
05ETP2TX	1LPAH	Dibenzothiophene	4	2	ug/kg		2.6	0.0989949	4	0.6645
05ETP2TX	1LPAH	Fluorene	18	2	ug/kg		2.31	0.4101219	3	0.6645
05ETP2TX	1LPAH	Naphthalene	10	2	ug/kg		6.91	0.6788225	7	1.03
05ETP2TX	1LPAH	Phenanthrene	16	2	ug/kg		22.35	3.6062446	12	1.84

ProjectID	RGROUP	Analyte	Avg RSD	Num RSD Results	Units	Add QA Code	Avg SFEI Result	Avg StDev Of SFEIResult	Min Of xMDL	Avg MDL
05ETP2TX	2CHLR	gamma-Chlordane	25	2	ug/kg		1.61	0.3959798	3	0.535
05ETP2TX	2CHLR	trans-Nonachlor	10	2	ug/kg		1.55	0.1555635	3	0.515
05ETP2TX	2HPAH	2-Methylfluoranthene	12	2	ug/kg		3.62	0.4384062	5	0.6645
05ETP2TX	2HPAH	Benz(a)anthracene	21	2	ug/kg		9.56	2.0364675	14	0.6645
05ETP2TX	2HPAH	Benzo(a)pyrene	19	2	ug/kg		15.95	3.0405592	24	0.6645
05ETP2TX	2HPAH	Benzo(b)fluoranthene	12	2	ug/kg		33.3	3.959798	50	0.6645
05ETP2TX	2HPAH	Benzo(e)pyrene	8	2	ug/kg		22	1.6970563	33	0.6645
05ETP2TX	2HPAH	Benzo(ghi)perylene	6	2	ug/kg		26.4	1.6970563	3	8.11
05ETP2TX	2HPAH	Benzo(k)fluoranthene	12	2	ug/kg		10.075	1.1667262	15	0.6645
05ETP2TX	2HPAH	Chrysene	16	2	ug/kg		16.4	2.5455844	25	0.6645
05ETP2TX	2HPAH	Dibenz(a,h)anthracene	14	2	ug/kg		6.5	0.9192388	10	0.6645
05ETP2TX	2HPAH	Fluoranthene	26	2	ug/kg		31.1	8.2024387	47	0.6645
05ETP2TX	2HPAH	Indeno(1,2,3-cd)pyrene	17	2	ug/kg		21.1	3.6769553	32	0.6645
05ETP2TX	2HPAH	Perylene	10	2	ug/kg		8.58	0.8202439	13	0.6645
05ETP2TX	2HPAH	Pyrene	18	2	ug/kg		31.3	5.6568542	47	0.6645
05ETP2TX	5Other	Oxadiazon	9	2	ug/kg		4.875	0.4596194	4	1.235
05ETP2TX	PBDE	BDE 047	6	2	ug/kg		1.91	0.1131371	4	0.517
05ETP2TX	PBDE	BDE 099	4	2	ug/kg		2.87	0.1131371	6	0.521
05ETP2TX	PCB	PCB 031	26	2	ug/kg		0.405	0.1046518	3	0.1325
05ETP2TX	PCB	PCB 052	43	4	ug/kg		0.518	0.198697	3	0.13275
05ETP2TX	PCB	PCB 066	30	2	ug/kg		0.443	0.1343503	3	0.1325
05ETP2TX	PCB	PCB 070	5	2	ug/kg		0.4415	0.0205061	3	0.1325
05ETP2TX	PCB	PCB 095	16	2	ug/kg		0.688	0.1103087	5	0.1325
05ETP2TX	PCB	PCB 101	9	2	ug/kg		0.7135	0.0643467	5	0.1325
05ETP2TX	PCB	PCB 110	54	4	ug/kg		0.8105	0.350725	3	0.13275
05ETP2TX	PCB	PCB 118	34	4	ug/kg		0.7245	0.231931	5	0.13275
05ETP2TX	PCB	PCB 138	4	2	ug/kg		1.57	0.0565685	12	0.1325
05ETP2TX	PCB	PCB 149	3	2	ug/kg		1.295	0.0353553	10	0.1325
05ETP2TX	PCB	PCB 151	14	2	ug/kg		0.5355	0.0756604	4	0.1325
05ETP2TX	PCB	PCB 153	7	2	ug/kg		1.18	0.0848528	9	0.1325
05ETP2TX	PCB	PCB 170	5	2	ug/kg		0.4315	0.0205061	3	0.1325
05ETP2TX	PCB	PCB 174	7	2	ug/kg		0.5495	0.0360624	4	0.1325
05ETP2TX	PCB	PCB 180	2	2	ug/kg		1.15	0.0282843	9	0.1325
05ETP2TX	PCB	PCB 187	17	2	ug/kg		0.613	0.1018234	5	0.1325
05ETP2TX		C1-Chrysenes	14	2	ug/kg		13.5	1.8384776	20	0.6645
05ETP2TX		C1-Dibenzothiophenes	0	2	ug/kg		4.73	0	7	0.6645
05ETP2TX		C1-Fluoranthenes_Pyrenes	17	2	ug/kg		41.6	6.9296465	28	1.475
05ETP2TX		C1-Fluorenes	4	2	ug/kg		5.6	0.212132	8	0.6645
05ETP2TX		C1-Naphthalenes	20	2	ug/kg		13	2.5455844	6	2.21
05ETP2TX		C1-Phenanthrenes_Anthracenes	3	2	ug/kg		24	0.7071068	36	0.6645
05ETP2TX		C2-Chrysenes	18	2	ug/kg		15	2.6870058	23	0.6645
05ETP2TX		C2-Dibenzothiophenes	1	2	ug/kg		10.25	0.0707107	15	0.6645
05ETP2TX		C2-Fluorenes	12	2	ug/kg		9.085	1.0960155	14	0.6645

ProjectID	RGROUP	Analyte	Avg RSD	Num RSD Results	Units	Add QA Code	Avg SFEI Result	Avg StDev Of SFEIResult	Min Of xMDL	Avg MDL
05ETP2TX		C2-Naphthalenes	12	2	ug/kg		13.7	1.6970563	7	1.915
05ETP2TX		C2-Phenanthrenes_Anthracenes	3	2	ug/kg		25.9	0.8485281	39	0.6645
05ETP2TX		C3-Chrysenes	0	2	ug/kg		13.8	0	21	0.6645
05ETP2TX		C3-Dibenzothiophenes	4	2	ug/kg		7.25	0.2969848	11	0.6645
05ETP2TX		C3-Fluorenes	16	2	ug/kg		6.31	1.0323759	9	0.6645
05ETP2TX		C3-Naphthalenes	9	2	ug/kg		9.375	0.8838835	14	0.6645
05ETP2TX		C3-Phenanthrenes_Anthracenes	5	2	ug/kg		18	0.9899495	27	0.6645
05ETP2TX		C4-Naphthalenes	4	2	ug/kg		3.405	0.1202082	5	0.6645
05ETP2TX		C4-Phenanthrenes_Anthracenes	22	2	ug/kg		7.535	1.6617009	11	0.6645
05ETP2TX	AGS	% Clay (<4um)	0	3	%		35.58985	0.0296105	401	0.088831
05ETP2TX	AGS	% Sand (63um-2mm)	1	3	%		35.44368	0.3633703	33	1.090111
05ETP2TX	AGS	% Silt (4um-63um)	1	3	%		28.96647	0.3910226	25	1.173068
05ETP2TX	ANC	TOC	2	3	%		1.679333	0.039145	14	0.117
05ETP2TX	ANC	Total Nitrogen	2	3	%		0.159333	0.0025166	20	0.008
05ETP2TX	ANC	% Solids - SED-TE-BRL	2	2	%		69.72	1.145513	872	0.08
05ETP2TX	TE	Ag	3	2	mg/kg		0.241578	0.0073135	81	0.003
05ETP2TX	TE	Al	3	2	mg/kg		49859.63	1577.6171	712	70
05ETP2TX	TE	As	5	4	mg/kg		4.937523	0.2393053	47	0.1
05ETP2TX	TE	Cd	10	2	mg/kg		0.23419	0.0240299	59	0.004
05ETP2TX	TE	Cu	0	2	mg/kg		29.03369	0.104478	726	0.04
05ETP2TX	TE	Fe	3	2	mg/kg		25258.57	637.31561	90	280
05ETP2TX	TE	Hg	9	4	mg/kg		0.194135	0.01501	1120	0.000126
05ETP2TX	TE	MeHg	5	4	ug/kg		0.72125	0.0392444	205	0.0035
05ETP2TX	TE	Mn	1	2	mg/kg		531.6194	6.6865889	10632	0.05
05ETP2TX	TE	Ni	2	2	mg/kg		86.73168	1.6716472	2168	0.04
05ETP2TX	TE	Pb	0	2	mg/kg		18.61702	0	2069	0.009
05ETP2TX	TE	Se	22	2	mg/kg		0.111	0.0240416	11	0.01
05ETP2TX	TE	Zn	1	2	mg/kg		117.0323	0.6113214	1463	0.08
05ETP2TX	TOXWQ	DO	11	10	mg/L		8.56	0.9050967	83	0.1
05ETP2TX	TOXWQ	pH	1	15	pH		8.422667	0.08495	834	0.01
05ETP2TX	TOXWQ	Salinity	0	10	o/oo		20.44	0.0848528	202	0.1
05ETP2TX	TOXWQ	Temperature	1	15	°C		25.37333	0.2804237	252	0.1

ProjectID	RGROUP	Analyte	Avg RSD	Num RSD Results	Units	Add QA Code	Avg SFEI Result	Avg StDev Of SFEIResult	Min Of xMDL	Avg MDL
05ETP2TX	2CHLR	gamma-Chlordane	25	2	ug/kg		1.61	0.3959798	3	0.535
05ETP2TX	2CHLR	trans-Nonachlor	10	2	ug/kg		1.55	0.1555635	3	0.515
05ETP2TX	2HPAH	2-Methylfluoranthene	12	2	ug/kg		3.62	0.4384062	5	0.6645
05ETP2TX	2HPAH	Benz(a)anthracene	21	2	ug/kg		9.56	2.0364675	14	0.6645
05ETP2TX	2HPAH	Benzo(a)pyrene	19	2	ug/kg		15.95	3.0405592	24	0.6645
05ETP2TX	2HPAH	Benzo(b)fluoranthene	12	2	ug/kg		33.3	3.959798	50	0.6645
05ETP2TX	2HPAH	Benzo(e)pyrene	8	2	ug/kg		22	1.6970563	33	0.6645
05ETP2TX	2HPAH	Benzo(ghi)perylene	6	2	ug/kg		26.4	1.6970563	3	8.11
05ETP2TX	2HPAH	Benzo(k)fluoranthene	12	2	ug/kg		10.075	1.1667262	15	0.6645
05ETP2TX	2HPAH	Chrysene	16	2	ug/kg		16.4	2.5455844	25	0.6645
05ETP2TX	2HPAH	Dibenz(a,h)anthracene	14	2	ug/kg		6.5	0.9192388	10	0.6645
05ETP2TX	2HPAH	Fluoranthene	26	2	ug/kg		31.1	8.2024387	47	0.6645
05ETP2TX	2HPAH	Indeno(1,2,3-cd)pyrene	17	2	ug/kg		21.1	3.6769553	32	0.6645
05ETP2TX	2HPAH	Perylene	10	2	ug/kg		8.58	0.8202439	13	0.6645
05ETP2TX	2HPAH	Pyrene	18	2	ug/kg		31.3	5.6568542	47	0.6645
05ETP2TX	5Other	Oxadiazon	9	2	ug/kg		4.875	0.4596194	4	1.235
05ETP2TX	PBDE	BDE 047	6	2	ug/kg		1.91	0.1131371	4	0.517
05ETP2TX	PBDE	BDE 099	4	2	ug/kg		2.87	0.1131371	6	0.521
05ETP2TX	PCB	PCB 031	26	2	ug/kg		0.405	0.1046518	3	0.1325
05ETP2TX	PCB	PCB 052	43	4	ug/kg		0.518	0.198697	3	0.13275
05ETP2TX	PCB	PCB 066	30	2	ug/kg		0.443	0.1343503	3	0.1325
05ETP2TX	PCB	PCB 070	5	2	ug/kg		0.4415	0.0205061	3	0.1325
05ETP2TX	PCB	PCB 095	16	2	ug/kg		0.688	0.1103087	5	0.1325
05ETP2TX	PCB	PCB 101	9	2	ug/kg		0.7135	0.0643467	5	0.1325
05ETP2TX	PCB	PCB 110	54	4	ug/kg		0.8105	0.350725	3	0.13275
05ETP2TX	PCB	PCB 118	34	4	ug/kg		0.7245	0.231931	5	0.13275
05ETP2TX	PCB	PCB 138	4	2	ug/kg		1.57	0.0565685	12	0.1325
05ETP2TX	PCB	PCB 149	3	2	ug/kg		1.295	0.0353553	10	0.1325
05ETP2TX	PCB	PCB 151	14	2	ug/kg		0.5355	0.0756604	4	0.1325
05ETP2TX	PCB	PCB 153	7	2	ug/kg		1.18	0.0848528	9	0.1325
05ETP2TX	PCB	PCB 170	5	2	ug/kg		0.4315	0.0205061	3	0.1325
05ETP2TX	PCB	PCB 174	7	2	ug/kg		0.5495	0.0360624	4	0.1325
05ETP2TX	PCB	PCB 180	2	2	ug/kg		1.15	0.0282843	9	0.1325
05ETP2TX	PCB	PCB 187	17	2	ug/kg		0.613	0.1018234	5	0.1325

ProjectID	RGROUP	Analyte	Avg RSD	Num RSD Results	Units	Add QA Code	Avg SFEI Result	Avg StDev Of SFEIResult	Min Of xMDL	Avg MDL
05ETP2TX		C1-Chrysenes	14	2	ug/kg		13.5	1.8384776	20	0.6645
05ETP2TX		C1-Dibenzothiophenes	0	2	ug/kg		4.73	0	7	0.6645
05ETP2TX		C1-Fluoranthenes_Pyrenes	17	2	ug/kg		41.6	6.9296465	28	1.475
05ETP2TX		C1-Fluorenes	4	2	ug/kg		5.6	0.212132	8	0.6645
05ETP2TX		C1-Naphthalenes	20	2	ug/kg		13	2.5455844	6	2.21
05ETP2TX		C1-Phenanthrenes_Anthracenes	3	2	ug/kg		24	0.7071068	36	0.6645
05ETP2TX		C2-Chrysenes	18	2	ug/kg		15	2.6870058	23	0.6645
05ETP2TX		C2-Dibenzothiophenes	1	2	ug/kg		10.25	0.0707107	15	0.6645
05ETP2TX		C2-Fluorenes	12	2	ug/kg		9.085	1.0960155	14	0.6645
05ETP2TX		C2-Naphthalenes	12	2	ug/kg		13.7	1.6970563	7	1.915
05ETP2TX		C2-Phenanthrenes_Anthracenes	3	2	ug/kg		25.9	0.8485281	39	0.6645
05ETP2TX		C3-Chrysenes	0	2	ug/kg		13.8	0	21	0.6645
05ETP2TX		C3-Dibenzothiophenes	4	2	ug/kg		7.25	0.2969848	11	0.6645
05ETP2TX		C3-Fluorenes	16	2	ug/kg		6.31	1.0323759	9	0.6645
05ETP2TX		C3-Naphthalenes	9	2	ug/kg		9.375	0.8838835	14	0.6645
05ETP2TX		C3-Phenanthrenes_Anthracenes	5	2	ug/kg		18	0.9899495	27	0.6645
05ETP2TX		C4-Naphthalenes	4	2	ug/kg		3.405	0.1202082	5	0.6645
05ETP2TX		C4-Phenanthrenes_Anthracenes	22	2	ug/kg		7.535	1.6617009	11	0.6645
05ETP2TX	AGS	% Clay (<4um)	0	3	%		35.58985	0.0296105	401	0.088831
05ETP2TX	AGS	% Sand (63um-2mm)	1	3	%		35.44368	0.3633703	33	1.090111
05ETP2TX	AGS	% Silt (4um-63um)	1	3	%		28.96647	0.3910226	25	1.173068
05ETP2TX	ANC	TOC	2	3	%		1.679333	0.039145	14	0.117
05ETP2TX	ANC	Total Nitrogen	2	3	%		0.159333	0.0025166	20	0.008
05ETP2TX	ANC	% Solids - SED-TE-BRL	2	2	%		69.72	1.145513	872	0.08
05ETP2TX	TE	Ag	3	2	mg/kg		0.241578	0.0073135	81	0.003
05ETP2TX	TE	Al	3	2	mg/kg		49859.63	1577.6171	712	70
05ETP2TX	TE	As	5	4	mg/kg		4.937523	0.2393053	47	0.1
05ETP2TX	TE	Cd	10	2	mg/kg		0.23419	0.0240299	59	0.004
05ETP2TX	TE	Cu	0	2	mg/kg		29.03369	0.104478	726	0.04
05ETP2TX	TE	Fe	3	2	mg/kg		25258.57	637.31561	90	280
05ETP2TX	TE	Hg	9	4	mg/kg		0.194135	0.01501	1120	0.000126
05ETP2TX	TE	MeHg	5	4	ug/kg		0.72125	0.0392444	205	0.0035
05ETP2TX	TE	Mn	1	2	mg/kg		531.6194	6.6865889	10632	0.05
05ETP2TX	TE	Ni	2	2	mg/kg		86.73168	1.6716472	2168	0.04
05ETP2TX	TE	Pb	0	2	mg/kg		18.61702	0	2069	0.009
05ETP2TX	TE	Se	22	2	mg/kg		0.111	0.0240416	11	0.01
05ETP2TX	TE	Zn	1	2	mg/kg		117.0323	0.6113214	1463	0.08
05ETP2TX	TOXWQ	DO	11	10	mg/L		8.56	0.9050967	83	0.1
05ETP2TX	TOXWQ	pH	1	15	pH		8.422667	0.08495	834	0.01
05ETP2TX	TOXWQ	Salinity	0	10	o/oo		20.44	0.0848528	202	0.1
05ETP2TX	TOXWQ	Temperature	1	15	°C		25.37333	0.2804237	252	0.1

APPENDIX C. FIELD SAMPLE RESULTS (SEE CHAPTER 1)
CHEMICAL AND TOXICITY ANALYSES FROM AMBIENT SEDIMENT SAMPLING IN TRIBUTARIES OF THE SAN FRANCISCO ESTUARY (2004-2005)

QUALIFIER DEFINITIONS:

QACode Definitions

QACode	QACodeDescr
BRKA	Sample container broken but analyzed
GN	Surrogate recovery is outside of control limits
H	A holding time violation has occurred.
HT	Analytical value calculated using results from associated tests
IL	RPD exceeds laboratory control limit
J	Estimated value - EPA Flag
NBC	Result is not blank corrected (SFEI)
SC	Surrogate Corrected Value
SCR	Screening level analysis
DO	Coeluting congener
VIL	RPD exceeds control limit, flagged by QAO
VIP	Analyte detected in method, trip, or equipment blank, flagged by QAO
VIU	Percent Recovery exceeds laboratory control limit, flagged by QAO
VRIP	Analyte detected in method blank and result is deamed unusable, flagged by QAO
VRIU	Percent Recovery exceeds laboratory control limit and result is deamed unusable, flagged by QAO
X	None - No QA Qualifier (No blank cells are allowed in the QACode column)

ResQualCode Definitions

ResQualCode	ResQualDescription
DNQ	Detected Not Quantifiable (result is greater than MDL but less than Reporting Limit)
NA	Not Analyzed
ND	Not Detected

Appendix Table C.1. Sediment quality results from the ambient tributary study in watersheds of the San Francisco Estuary (2004-2005). N = number of replicates. TOC = total organic carbon. The grainsize parameter % Fines, is a calculated result by summing clay and silt fractions. Lab codes are defined in table 1.1.

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	COYCRKLWR	01-Nov-04	1SEDQ	0ANC	TOC	3	VNBC	1.14	%	0.02	UCSCDET	EPW04_UCSCDETTOCTN
2004-11	COYCRKUP	01-Nov-04	1SEDQ	0ANC	TOC	1	VNBC	0.74	%	0.02	UCSCDET	EPW04_UCSCDETTOCTN
2004-11	NAPRIVLWR	02-Nov-04	1SEDQ	0ANC	TOC	1	VNBC	1.74	%	0.02	UCSCDET	EPW04_UCSCDETTOCTN
2004-11	NAPRIVUP	02-Nov-04	1SEDQ	0ANC	TOC	1	VNBC	0.94	%	0.02	UCSCDET	EPW04_UCSCDETTOCTN
2004-11	PETRIVLWR	02-Nov-04	1SEDQ	0ANC	TOC	1	VNBC	1.99	%	0.02	UCSCDET	EPW04_UCSCDETTOCTN
2004-11	PETRIVUP	02-Nov-04	1SEDQ	0ANC	TOC	1	VNBC	1.87	%	0.02	UCSCDET	EPW04_UCSCDETTOCTN
2004-11	SANLORCRKLWR	03-Nov-04	1SEDQ	0ANC	TOC	1	VNBC	1.55	%	0.02	UCSCDET	EPW04_UCSCDETTOCTN
2004-11	SANLORCRKUP	03-Nov-04	1SEDQ	0ANC	TOC	1	VNBC	0.49	%	0.02	UCSCDET	EPW04_UCSCDETTOCTN
2004-11	SANMATCRKLWR	04-Nov-04	1SEDQ	0ANC	TOC	1	VNBC	2.70	%	0.02	UCSCDET	EPW04_UCSCDETTOCTN
2004-11	SANMATCRKUP	04-Nov-04	1SEDQ	0ANC	TOC	1	VNBC	1.96	%	0.02	UCSCDET	EPW04_UCSCDETTOCTN
2004-11	SUICRKLWR	03-Nov-04	1SEDQ	0ANC	TOC	1	VNBC	1.92	%	0.02	UCSCDET	EPW04_UCSCDETTOCTN
2004-11	SUICRKUP	03-Nov-04	1SEDQ	0ANC	TOC	1	VNBC	1.00	%	0.02	UCSCDET	EPW04_UCSCDETTOCTN
2005-04	COYCRKLWR	18-Apr-05	1SEDQ	0ANC	TOC	3	VNBC,X	1.68	%	0.12	UCSCDET	EPTOX05
2005-04	COYCRKUP	18-Apr-05	1SEDQ	0ANC	TOC	1	VNBC,X	0.96	%	0.12	UCSCDET	EPTOX05
2005-04	NAPRIVLWR	19-Apr-05	1SEDQ	0ANC	TOC	1	VNBC,X	3.13	%	0.12	UCSCDET	EPTOX05
2005-04	NAPRIVUP	19-Apr-05	1SEDQ	0ANC	TOC	1	VNBC,X	1.25	%	0.12	UCSCDET	EPTOX05
2005-04	PETRIVLWR	20-Apr-05	1SEDQ	0ANC	TOC	1	VNBC,X	2.06	%	0.12	UCSCDET	EPTOX05
2005-04	PETRIVUP	20-Apr-05	1SEDQ	0ANC	TOC	1	VNBC,X	2.36	%	0.12	UCSCDET	EPTOX05
2005-04	SANLORCRKLWR	20-Apr-05	1SEDQ	0ANC	TOC	1	VNBC,X	0.52	%	0.12	UCSCDET	EPTOX05
2005-04	SANLORCRKUP	20-Apr-05	1SEDQ	0ANC	TOC	1	VNBC,X	3.03	%	0.12	UCSCDET	EPTOX05
2005-04	SANMATCRKLWR	18-Apr-05	1SEDQ	0ANC	TOC	1	VNBC,X	2.53	%	0.12	UCSCDET	EPTOX05
2005-04	SANMATCRKUP	18-Apr-05	1SEDQ	0ANC	TOC	1	VNBC,X	3.25	%	0.12	UCSCDET	EPTOX05
2005-04	SUICRKLWR	19-Apr-05	1SEDQ	0ANC	TOC	1	VNBC,X	1.82	%	0.12	UCSCDET	EPTOX05
2005-04	SUICRKUP	19-Apr-05	1SEDQ	0ANC	TOC	1	VNBC,X	0.57	%	0.12	UCSCDET	EPTOX05
2004-11	COYCRKLWR	01-Nov-04	1SEDQ	0ANC	Total Nitrogen	3	VNBC	0.10	%	0.00	UCSCDET	EPW04_UCSCDETTOCTN
2004-11	COYCRKUP	01-Nov-04	1SEDQ	0ANC	Total Nitrogen	1	VNBC	0.06	%	0.00	UCSCDET	EPW04_UCSCDETTOCTN

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	NAPRIVLWR	02-Nov-04	1SEDQ	0ANC	Total Nitrogen	1	VNBC	0.15	%	0.00	UCSCDET	EPW04_UCSCDETTOCTN
2004-11	NAPRIVUP	02-Nov-04	1SEDQ	0ANC	Total Nitrogen	1	VNBC	0.08	%	0.00	UCSCDET	EPW04_UCSCDETTOCTN
2004-11	PETRIVLWR	02-Nov-04	1SEDQ	0ANC	Total Nitrogen	1	VNBC	0.21	%	0.00	UCSCDET	EPW04_UCSCDETTOCTN
2004-11	PETRIVUP	02-Nov-04	1SEDQ	0ANC	Total Nitrogen	1	VNBC	0.16	%	0.00	UCSCDET	EPW04_UCSCDETTOCTN
2004-11	SANLORCRKLWR	03-Nov-04	1SEDQ	0ANC	Total Nitrogen	1	VNBC	0.13	%	0.00	UCSCDET	EPW04_UCSCDETTOCTN
2004-11	SANLORCRKUP	03-Nov-04	1SEDQ	0ANC	Total Nitrogen	1	VNBC	0.05	%	0.00	UCSCDET	EPW04_UCSCDETTOCTN
2004-11	SANMATCRKLWR	04-Nov-04	1SEDQ	0ANC	Total Nitrogen	1	VNBC	0.24	%	0.00	UCSCDET	EPW04_UCSCDETTOCTN
2004-11	SANMATCRKUP	04-Nov-04	1SEDQ	0ANC	Total Nitrogen	1	VNBC	0.13	%	0.00	UCSCDET	EPW04_UCSCDETTOCTN
2004-11	SUICRKLWR	03-Nov-04	1SEDQ	0ANC	Total Nitrogen	1	VNBC	0.15	%	0.00	UCSCDET	EPW04_UCSCDETTOCTN
2004-11	SUICRKUP	03-Nov-04	1SEDQ	0ANC	Total Nitrogen	1	VNBC	0.11	%	0.00	UCSCDET	EPW04_UCSCDETTOCTN
2005-04	COYCRKLWR	18-Apr-05	1SEDQ	0ANC	Total Nitrogen	3	VNBC,X	0.16	%	0.01	UCSCDET	EPTOX05
2005-04	COYCRKUP	18-Apr-05	1SEDQ	0ANC	Total Nitrogen	1	VNBC,X	0.07	%	0.01	UCSCDET	EPTOX05
2005-04	NAPRIVLWR	19-Apr-05	1SEDQ	0ANC	Total Nitrogen	1	VNBC,X	0.24	%	0.01	UCSCDET	EPTOX05
2005-04	NAPRIVUP	19-Apr-05	1SEDQ	0ANC	Total Nitrogen	1	VNBC,X	0.10	%	0.01	UCSCDET	EPTOX05
2005-04	PETRIVLWR	20-Apr-05	1SEDQ	0ANC	Total Nitrogen	1	VNBC,X	0.25	%	0.01	UCSCDET	EPTOX05
2005-04	PETRIVUP	20-Apr-05	1SEDQ	0ANC	Total Nitrogen	1	VNBC,X	0.18	%	0.01	UCSCDET	EPTOX05
2005-04	SANLORCRKLWR	20-Apr-05	1SEDQ	0ANC	Total Nitrogen	1	VNBC,X	0.05	%	0.01	UCSCDET	EPTOX05
2005-04	SANLORCRKUP	20-Apr-05	1SEDQ	0ANC	Total Nitrogen	1	VNBC,X	0.22	%	0.01	UCSCDET	EPTOX05
2005-04	SANMATCRKLWR	18-Apr-05	1SEDQ	0ANC	Total Nitrogen	1	VNBC,X	0.28	%	0.01	UCSCDET	EPTOX05
2005-04	SANMATCRKUP	18-Apr-05	1SEDQ	0ANC	Total Nitrogen	1	VNBC,X	0.24	%	0.01	UCSCDET	EPTOX05
2005-04	SUICRKLWR	19-Apr-05	1SEDQ	0ANC	Total Nitrogen	1	VNBC,X	0.15	%	0.01	UCSCDET	EPTOX05
2005-04	SUICRKUP	19-Apr-05	1SEDQ	0ANC	Total Nitrogen	1	VNBC,X	0.05	%	0.01	UCSCDET	EPTOX05
2004-11	COYCRKLWR	01-Nov-04	1SEDQ	AGS	% Clay (<4um)	3	VNBC	21.48	%	0.09	UCSCDET	UCSCDET-38476-GS
2004-11	COYCRKUP	01-Nov-04	1SEDQ	AGS	% Clay (<4um)	1	VNBC	15.28	%	0.09	UCSCDET	UCSCDET-38476-GS
2004-11	NAPRIVLWR	02-Nov-04	1SEDQ	AGS	% Clay (<4um)	1	VNBC	35.57	%	0.09	UCSCDET	UCSCDET-38476-GS
2004-11	NAPRIVUP	02-Nov-04	1SEDQ	AGS	% Clay (<4um)	1	VNBC	19.72	%	0.09	UCSCDET	UCSCDET-38476-GS
2004-11	PETRIVLWR	02-Nov-04	1SEDQ	AGS	% Clay (<4um)	1	VNBC	65.85	%	0.09	UCSCDET	UCSCDET-38476-GS
2004-11	PETRIVUP	02-Nov-04	1SEDQ	AGS	% Clay (<4um)	1	VNBC	23.83	%	0.09	UCSCDET	UCSCDET-38476-GS
2004-11	SANLORCRKLWR	03-Nov-04	1SEDQ	AGS	% Clay (<4um)	1	VNBC	22.40	%	0.09	UCSCDET	UCSCDET-38476-GS
2004-11	SANLORCRKUP	03-Nov-04	1SEDQ	AGS	% Clay (<4um)	1	VNBC	8.78	%	0.09	UCSCDET	UCSCDET-38476-GS

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	SANMATCRKLWR	04-Nov-04	1SEDQ	AGS	% Clay (<4um)	1	VNBC	67.17	%	0.09	UCSCDET	UCSCDET-38476-GS
2004-11	SANMATCRKUP	04-Nov-04	1SEDQ	AGS	% Clay (<4um)	1	VNBC	19.54	%	0.09	UCSCDET	UCSCDET-38476-GS
2004-11	SUICRKLWR	03-Nov-04	1SEDQ	AGS	% Clay (<4um)	1	VNBC	40.11	%	0.09	UCSCDET	UCSCDET-38476-GS
2004-11	SUICRKUP	03-Nov-04	1SEDQ	AGS	% Clay (<4um)	1	VNBC	29.39	%	0.09	UCSCDET	UCSCDET-38476-GS
2005-04	COYCRKLWR	18-Apr-05	1SEDQ	AGS	% Clay (<4um)	3	VNBC	35.59	%	0.09	UCSCDET	UCSCDET-38476-GS
2005-04	COYCRKUP	18-Apr-05	1SEDQ	AGS	% Clay (<4um)	1	VNBC	9.13	%	0.09	UCSCDET	UCSCDET-38476-GS
2005-04	NAPRIVLWR	19-Apr-05	1SEDQ	AGS	% Clay (<4um)	1	VNBC	33.21	%	0.09	UCSCDET	UCSCDET-38476-GS
2005-04	NAPRIVUP	19-Apr-05	1SEDQ	AGS	% Clay (<4um)	1	VNBC	17.50	%	0.09	UCSCDET	UCSCDET-38476-GS
2005-04	PETRIVLWR	20-Apr-05	1SEDQ	AGS	% Clay (<4um)	1	VNBC	70.52	%	0.09	UCSCDET	UCSCDET-38476-GS
2005-04	PETRIVUP	20-Apr-05	1SEDQ	AGS	% Clay (<4um)	1	VNBC	21.07	%	0.09	UCSCDET	UCSCDET-38476-GS
2005-04	SANLORCRKLWR	20-Apr-05	1SEDQ	AGS	% Clay (<4um)	1	VNBC	9.90	%	0.09	UCSCDET	UCSCDET-38476-GS
2005-04	SANLORCRKUP	20-Apr-05	1SEDQ	AGS	% Clay (<4um)	1	VNBC	12.13	%	0.09	UCSCDET	UCSCDET-38476-GS
2005-04	SANMATCRKLWR	18-Apr-05	1SEDQ	AGS	% Clay (<4um)	1	VNBC	63.85	%	0.09	UCSCDET	UCSCDET-38476-GS
2005-04	SANMATCRKUP	18-Apr-05	1SEDQ	AGS	% Clay (<4um)	1	VNBC	27.22	%	0.09	UCSCDET	UCSCDET-38476-GS
2005-04	SUICRKLWR	19-Apr-05	1SEDQ	AGS	% Clay (<4um)	1	VNBC	28.07	%	0.09	UCSCDET	UCSCDET-38476-GS
2005-04	SUICRKUP	19-Apr-05	1SEDQ	AGS	% Clay (<4um)	1	VNBC	10.47	%	0.09	UCSCDET	UCSCDET-38476-GS
2004-11	COYCRKLWR	01-Nov-04	1SEDQ	AGS	% Fines (<63 um)	3	VNBC	41.06	%		UCSCDET	UCSCDET-38476-GS
2004-11	COYCRKUP	01-Nov-04	1SEDQ	AGS	% Fines (<63 um)	1	VNBC	32.38	%		UCSCDET	UCSCDET-38476-GS
2004-11	NAPRIVLWR	02-Nov-04	1SEDQ	AGS	% Fines (<63 um)	1	VNBC	76.77	%		UCSCDET	UCSCDET-38476-GS
2004-11	NAPRIVUP	02-Nov-04	1SEDQ	AGS	% Fines (<63 um)	1	VNBC	36.78	%		UCSCDET	UCSCDET-38476-GS
2004-11	PETRIVLWR	02-Nov-04	1SEDQ	AGS	% Fines (<63 um)	1	VNBC	98.34	%		UCSCDET	UCSCDET-38476-GS
2004-11	PETRIVUP	02-Nov-04	1SEDQ	AGS	% Fines (<63 um)	1	VNBC	46.54	%		UCSCDET	UCSCDET-38476-GS
2004-11	SANLORCRKLWR	03-Nov-04	1SEDQ	AGS	% Fines (<63 um)	1	VNBC	46.15	%		UCSCDET	UCSCDET-38476-GS
2004-11	SANLORCRKUP	03-Nov-04	1SEDQ	AGS	% Fines (<63 um)	1	VNBC	18.48	%		UCSCDET	UCSCDET-38476-GS
2004-11	SANMATCRKLWR	04-Nov-04	1SEDQ	AGS	% Fines (<63 um)	1	VNBC	97.20	%		UCSCDET	UCSCDET-38476-GS
2004-11	SANMATCRKUP	04-Nov-04	1SEDQ	AGS	% Fines (<63 um)	1	VNBC	41.85	%		UCSCDET	UCSCDET-38476-GS
2004-11	SUICRKLWR	03-Nov-04	1SEDQ	AGS	% Fines (<63 um)	1	VNBC	78.34	%		UCSCDET	UCSCDET-38476-GS
2004-11	SUICRKUP	03-Nov-04	1SEDQ	AGS	% Fines (<63 um)	1	VNBC	54.66	%		UCSCDET	UCSCDET-38476-GS
2005-04	COYCRKLWR	18-Apr-05	1SEDQ	AGS	% Fines (<63 um)	3	VNBC	66.66	%		UCSCDET	UCSCDET-38476-GS
2005-04	COYCRKUP	18-Apr-05	1SEDQ	AGS	% Fines (<63 um)	1	VNBC	24.20	%		UCSCDET	UCSCDET-38476-GS

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	NAPRIVLWR	19-Apr-05	1SEDQ	AGS	% Fines (<63 um)	1	VNBC	86.26	%		UCSCDET	UCSCDET-38476-GS
2005-04	NAPRIVUP	19-Apr-05	1SEDQ	AGS	% Fines (<63 um)	1	VNBC	44.38	%		UCSCDET	UCSCDET-38476-GS
2005-04	PETRIVLWR	20-Apr-05	1SEDQ	AGS	% Fines (<63 um)	1	VNBC	99.62	%		UCSCDET	UCSCDET-38476-GS
2005-04	PETRIVUP	20-Apr-05	1SEDQ	AGS	% Fines (<63 um)	1	VNBC	43.52	%		UCSCDET	UCSCDET-38476-GS
2005-04	SANLORCRKLWR	20-Apr-05	1SEDQ	AGS	% Fines (<63 um)	1	VNBC	35.10	%		UCSCDET	UCSCDET-38476-GS
2005-04	SANLORCRKUP	20-Apr-05	1SEDQ	AGS	% Fines (<63 um)	1	VNBC	35.04	%		UCSCDET	UCSCDET-38476-GS
2005-04	SANMATCRKLWR	18-Apr-05	1SEDQ	AGS	% Fines (<63 um)	1	VNBC	98.55	%		UCSCDET	UCSCDET-38476-GS
2005-04	SANMATCRKUP	18-Apr-05	1SEDQ	AGS	% Fines (<63 um)	1	VNBC	68.96	%		UCSCDET	UCSCDET-38476-GS
2005-04	SUICRKLWR	19-Apr-05	1SEDQ	AGS	% Fines (<63 um)	1	VNBC	67.74	%		UCSCDET	UCSCDET-38476-GS
2005-04	SUICRKUP	19-Apr-05	1SEDQ	AGS	% Fines (<63 um)	1	VNBC	29.53	%		UCSCDET	UCSCDET-38476-GS
2004-11	COYCRKLWR	01-Nov-04	1SEDQ	AGS	% Gravel+Shell (>2mm)	3	ND VNBC	0.00	%	1.09	UCSCDET	UCSCDET-38476-GS
2004-11	COYCRKUP	01-Nov-04	1SEDQ	AGS	% Gravel+Shell (>2mm)	1	ND VNBC	0.00	%	1.09	UCSCDET	UCSCDET-38476-GS
2004-11	NAPRIVLWR	02-Nov-04	1SEDQ	AGS	% Gravel+Shell (>2mm)	1	ND VNBC	0.00	%	1.09	UCSCDET	UCSCDET-38476-GS
2004-11	NAPRIVUP	02-Nov-04	1SEDQ	AGS	% Gravel+Shell (>2mm)	1	ND VNBC	0.00	%	1.09	UCSCDET	UCSCDET-38476-GS
2004-11	PETRIVLWR	02-Nov-04	1SEDQ	AGS	% Gravel+Shell (>2mm)	1	ND VNBC	0.00	%	1.09	UCSCDET	UCSCDET-38476-GS
2004-11	PETRIVUP	02-Nov-04	1SEDQ	AGS	% Gravel+Shell (>2mm)	1	ND VNBC	0.00	%	1.09	UCSCDET	UCSCDET-38476-GS
2004-11	SANLORCRKLWR	03-Nov-04	1SEDQ	AGS	% Gravel+Shell (>2mm)	1	ND VNBC	0.00	%	1.09	UCSCDET	UCSCDET-38476-GS
2004-11	SANLORCRKUP	03-Nov-04	1SEDQ	AGS	% Gravel+Shell (>2mm)	1	VNBC	21.70	%	1.09	UCSCDET	UCSCDET-38476-GS
2004-11	SANMATCRKLWR	04-Nov-04	1SEDQ	AGS	% Gravel+Shell (>2mm)	1	ND VNBC	0.00	%	1.09	UCSCDET	UCSCDET-38476-GS
2004-11	SANMATCRKUP	04-Nov-04	1SEDQ	AGS	% Gravel+Shell (>2mm)	1	ND VNBC	0.00	%	1.09	UCSCDET	UCSCDET-38476-GS
2004-11	SUICRKLWR	03-Nov-04	1SEDQ	AGS	% Gravel+Shell (>2mm)	1	ND VNBC	0.00	%	1.09	UCSCDET	UCSCDET-38476-GS
2004-11	SUICRKUP	03-Nov-04	1SEDQ	AGS	% Gravel+Shell (>2mm)	1	DNQ VJ,VNBC	1.27	%	1.09	UCSCDET	UCSCDET-38476-GS
2005-04	COYCRKLWR	18-Apr-05	1SEDQ	AGS	% Gravel+Shell (>2mm)	3	ND VNBC	0.00	%	1.09	UCSCDET	UCSCDET-38476-GS
2005-04	COYCRKUP	18-Apr-05	1SEDQ	AGS	% Gravel+Shell (>2mm)	1	ND VNBC	0.00	%	1.09	UCSCDET	UCSCDET-38476-GS
2005-04	NAPRIVLWR	19-Apr-05	1SEDQ	AGS	% Gravel+Shell (>2mm)	1	ND VNBC	0.00	%	1.09	UCSCDET	UCSCDET-38476-GS
2005-04	NAPRIVUP	19-Apr-05	1SEDQ	AGS	% Gravel+Shell (>2mm)	1	ND VNBC	0.00	%	1.09	UCSCDET	UCSCDET-38476-GS
2005-04	PETRIVLWR	20-Apr-05	1SEDQ	AGS	% Gravel+Shell (>2mm)	1	ND VNBC	0.00	%	1.09	UCSCDET	UCSCDET-38476-GS
2005-04	PETRIVUP	20-Apr-05	1SEDQ	AGS	% Gravel+Shell (>2mm)	1	VNBC	34.74	%	1.09	UCSCDET	UCSCDET-38476-GS
2005-04	SANLORCRKLWR	20-Apr-05	1SEDQ	AGS	% Gravel+Shell (>2mm)	1	ND VNBC	0.00	%	1.09	UCSCDET	UCSCDET-38476-GS
2005-04	SANLORCRKUP	20-Apr-05	1SEDQ	AGS	% Gravel+Shell (>2mm)	1	ND VNBC	0.00	%	1.09	UCSCDET	UCSCDET-38476-GS

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SANMATCRKLWR	18-Apr-05	1SEDQ	AGS	% Gravel+Shell (>2mm)	1	ND VNBC	0.00	%	1.09	UCSCDET	UCSCDET-38476-GS
2005-04	SANMATCRKUP	18-Apr-05	1SEDQ	AGS	% Gravel+Shell (>2mm)	1	ND VNBC	0.00	%	1.09	UCSCDET	UCSCDET-38476-GS
2005-04	SUICRKLWR	19-Apr-05	1SEDQ	AGS	% Gravel+Shell (>2mm)	1	ND VNBC	0.00	%	1.09	UCSCDET	UCSCDET-38476-GS
2005-04	SUICRKUP	19-Apr-05	1SEDQ	AGS	% Gravel+Shell (>2mm)	1	VNBC	5.32	%	1.09	UCSCDET	UCSCDET-38476-GS
2004-11	COYCRKLWR	01-Nov-04	1SEDQ	AGS	% Sand (63um-2mm)	3	VNBC	58.94	%	1.09	UCSCDET	UCSCDET-38476-GS
2004-11	COYCRKUP	01-Nov-04	1SEDQ	AGS	% Sand (63um-2mm)	1	VNBC	67.62	%	1.09	UCSCDET	UCSCDET-38476-GS
2004-11	NAPRIVLWR	02-Nov-04	1SEDQ	AGS	% Sand (63um-2mm)	1	VNBC	23.23	%	1.09	UCSCDET	UCSCDET-38476-GS
2004-11	NAPRIVUP	02-Nov-04	1SEDQ	AGS	% Sand (63um-2mm)	1	VNBC	62.48	%	1.09	UCSCDET	UCSCDET-38476-GS
2004-11	PETRIVLWR	02-Nov-04	1SEDQ	AGS	% Sand (63um-2mm)	1	DNQ VJ,VNBC	1.66	%	1.09	UCSCDET	UCSCDET-38476-GS
2004-11	PETRIVUP	02-Nov-04	1SEDQ	AGS	% Sand (63um-2mm)	1	VNBC	53.46	%	1.09	UCSCDET	UCSCDET-38476-GS
2004-11	SANLORCRKLWR	03-Nov-04	1SEDQ	AGS	% Sand (63um-2mm)	1	VNBC	53.85	%	1.09	UCSCDET	UCSCDET-38476-GS
2004-11	SANLORCRKUP	03-Nov-04	1SEDQ	AGS	% Sand (63um-2mm)	1	VNBC	59.82	%	1.09	UCSCDET	UCSCDET-38476-GS
2004-11	SANMATCRKLWR	04-Nov-04	1SEDQ	AGS	% Sand (63um-2mm)	1	DNQ VJ,VNBC	2.80	%	1.09	UCSCDET	UCSCDET-38476-GS
2004-11	SANMATCRKUP	04-Nov-04	1SEDQ	AGS	% Sand (63um-2mm)	1	VNBC	58.15	%	1.09	UCSCDET	UCSCDET-38476-GS
2004-11	SUICRKLWR	03-Nov-04	1SEDQ	AGS	% Sand (63um-2mm)	1	VNBC	21.66	%	1.09	UCSCDET	UCSCDET-38476-GS
2004-11	SUICRKUP	03-Nov-04	1SEDQ	AGS	% Sand (63um-2mm)	1	VNBC	44.07	%	1.09	UCSCDET	UCSCDET-38476-GS
2005-04	COYCRKLWR	18-Apr-05	1SEDQ	AGS	% Sand (63um-2mm)	3	VNBC	35.44	%	1.09	UCSCDET	UCSCDET-38476-GS
2005-04	COYCRKUP	18-Apr-05	1SEDQ	AGS	% Sand (63um-2mm)	1	VNBC	75.80	%	1.09	UCSCDET	UCSCDET-38476-GS
2005-04	NAPRIVLWR	19-Apr-05	1SEDQ	AGS	% Sand (63um-2mm)	1	VNBC	13.74	%	1.09	UCSCDET	UCSCDET-38476-GS
2005-04	NAPRIVUP	19-Apr-05	1SEDQ	AGS	% Sand (63um-2mm)	1	VNBC	55.62	%	1.09	UCSCDET	UCSCDET-38476-GS
2005-04	PETRIVLWR	20-Apr-05	1SEDQ	AGS	% Sand (63um-2mm)	1	ND VNBC	0.00	%	1.09	UCSCDET	UCSCDET-38476-GS
2005-04	PETRIVUP	20-Apr-05	1SEDQ	AGS	% Sand (63um-2mm)	1	VNBC	21.73	%	1.09	UCSCDET	UCSCDET-38476-GS
2005-04	SANLORCRKLWR	20-Apr-05	1SEDQ	AGS	% Sand (63um-2mm)	1	VNBC	64.90	%	1.09	UCSCDET	UCSCDET-38476-GS
2005-04	SANLORCRKUP	20-Apr-05	1SEDQ	AGS	% Sand (63um-2mm)	1	VNBC	64.96	%	1.09	UCSCDET	UCSCDET-38476-GS
2005-04	SANMATCRKLWR	18-Apr-05	1SEDQ	AGS	% Sand (63um-2mm)	1	DNQ J,VNBC	1.45	%	1.09	UCSCDET	UCSCDET-38476-GS
2005-04	SANMATCRKUP	18-Apr-05	1SEDQ	AGS	% Sand (63um-2mm)	1	VNBC	31.04	%	1.09	UCSCDET	UCSCDET-38476-GS
2005-04	SUICRKLWR	19-Apr-05	1SEDQ	AGS	% Sand (63um-2mm)	1	VNBC	32.26	%	1.09	UCSCDET	UCSCDET-38476-GS
2005-04	SUICRKUP	19-Apr-05	1SEDQ	AGS	% Sand (63um-2mm)	1	VNBC	65.15	%	1.09	UCSCDET	UCSCDET-38476-GS
2004-11	COYCRKLWR	01-Nov-04	1SEDQ	AGS	% Silt (4um-63um)	3	VNBC	19.57	%	1.17	UCSCDET	UCSCDET-38476-GS
2004-11	COYCRKUP	01-Nov-04	1SEDQ	AGS	% Silt (4um-63um)	1	VNBC	17.10	%	1.17	UCSCDET	UCSCDET-38476-GS

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	NAPRIVLWR	02-Nov-04	1SEDQ	AGS	% Silt (4um-63um)	1	VNBC	41.21	%	1.17	UCSCDET	UCSCDET-38476-GS
2004-11	NAPRIVUP	02-Nov-04	1SEDQ	AGS	% Silt (4um-63um)	1	VNBC	17.06	%	1.17	UCSCDET	UCSCDET-38476-GS
2004-11	PETRIVLWR	02-Nov-04	1SEDQ	AGS	% Silt (4um-63um)	1	VNBC	32.49	%	1.17	UCSCDET	UCSCDET-38476-GS
2004-11	PETRIVUP	02-Nov-04	1SEDQ	AGS	% Silt (4um-63um)	1	VNBC	22.71	%	1.17	UCSCDET	UCSCDET-38476-GS
2004-11	SANLORCRKLWR	03-Nov-04	1SEDQ	AGS	% Silt (4um-63um)	1	VNBC	23.75	%	1.17	UCSCDET	UCSCDET-38476-GS
2004-11	SANLORCRKUP	03-Nov-04	1SEDQ	AGS	% Silt (4um-63um)	1	VNBC	9.70	%	1.17	UCSCDET	UCSCDET-38476-GS
2004-11	SANMATCRKLWR	04-Nov-04	1SEDQ	AGS	% Silt (4um-63um)	1	VNBC	30.03	%	1.17	UCSCDET	UCSCDET-38476-GS
2004-11	SANMATCRKUP	04-Nov-04	1SEDQ	AGS	% Silt (4um-63um)	1	VNBC	22.31	%	1.17	UCSCDET	UCSCDET-38476-GS
2004-11	SUICRKLWR	03-Nov-04	1SEDQ	AGS	% Silt (4um-63um)	1	VNBC	38.23	%	1.17	UCSCDET	UCSCDET-38476-GS
2004-11	SUICRKUP	03-Nov-04	1SEDQ	AGS	% Silt (4um-63um)	1	VNBC	25.27	%	1.17	UCSCDET	UCSCDET-38476-GS
2005-04	COYCRKLWR	18-Apr-05	1SEDQ	AGS	% Silt (4um-63um)	3	VNBC	28.97	%	1.17	UCSCDET	UCSCDET-38476-GS
2005-04	COYCRKUP	18-Apr-05	1SEDQ	AGS	% Silt (4um-63um)	1	VNBC	15.07	%	1.17	UCSCDET	UCSCDET-38476-GS
2005-04	NAPRIVLWR	19-Apr-05	1SEDQ	AGS	% Silt (4um-63um)	1	VNBC	53.05	%	1.17	UCSCDET	UCSCDET-38476-GS
2005-04	NAPRIVUP	19-Apr-05	1SEDQ	AGS	% Silt (4um-63um)	1	VNBC	26.88	%	1.17	UCSCDET	UCSCDET-38476-GS
2005-04	PETRIVLWR	20-Apr-05	1SEDQ	AGS	% Silt (4um-63um)	1	VNBC	29.10	%	1.17	UCSCDET	UCSCDET-38476-GS
2005-04	PETRIVUP	20-Apr-05	1SEDQ	AGS	% Silt (4um-63um)	1	VNBC	22.45	%	1.17	UCSCDET	UCSCDET-38476-GS
2005-04	SANLORCRKLWR	20-Apr-05	1SEDQ	AGS	% Silt (4um-63um)	1	VNBC	25.20	%	1.17	UCSCDET	UCSCDET-38476-GS
2005-04	SANLORCRKUP	20-Apr-05	1SEDQ	AGS	% Silt (4um-63um)	1	VNBC	22.91	%	1.17	UCSCDET	UCSCDET-38476-GS
2005-04	SANMATCRKLWR	18-Apr-05	1SEDQ	AGS	% Silt (4um-63um)	1	VNBC	34.71	%	1.17	UCSCDET	UCSCDET-38476-GS
2005-04	SANMATCRKUP	18-Apr-05	1SEDQ	AGS	% Silt (4um-63um)	1	VNBC	41.74	%	1.17	UCSCDET	UCSCDET-38476-GS
2005-04	SUICRKLWR	19-Apr-05	1SEDQ	AGS	% Silt (4um-63um)	1	VNBC	39.67	%	1.17	UCSCDET	UCSCDET-38476-GS
2005-04	SUICRKUP	19-Apr-05	1SEDQ	AGS	% Silt (4um-63um)	1	VNBC	19.06	%	1.17	UCSCDET	UCSCDET-38476-GS

Appendix Table C.2. Sediment Trace Element results from the ambient tributary study in watersheds of the San Francisco Estuary (2004-2005). N = number of replicates. % solids were reported by each analytical laboratory. Two laboratories, BRL and UCSCDET, analyzed trace element samples in this study. Lab codes are defined in table 1.1.

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	COYCRKUP	01-Nov-04	2TE	0ANC	% Solids - SED-TE-BRL	1	VNBC	67.01	%	0.05	BRL	04-1051
2004-11	NAPRIVUP	02-Nov-04	2TE	0ANC	% Solids - SED-TE-BRL	1	VNBC	63.31	%	0.05	BRL	04-1051
2004-11	PETRIVUP	02-Nov-04	2TE	0ANC	% Solids - SED-TE-BRL	1	VNBC	48.83	%	0.05	BRL	04-1051
2004-11	SANLORCRKUP	03-Nov-04	2TE	0ANC	% Solids - SED-TE-BRL	1	VNBC	63.33	%	0.05	BRL	04-1051
2004-11	SANMATCRKLWR	04-Nov-04	2TE	0ANC	% Solids - SED-TE-BRL	1	VNBC	38.43	%	0.06	BRL	05-0074
2004-11	SANMATCRKUP	04-Nov-04	2TE	0ANC	% Solids - SED-TE-BRL	1	VNBC	62.52	%	0.05	BRL	04-1051
2004-11	SUICRKUP	03-Nov-04	2TE	0ANC	% Solids - SED-TE-BRL	1	VNBC	50.67	%	0.05	BRL	04-1051
2005-04	COYCRKUP	18-Apr-05	2TE	0ANC	% Solids - SED-TE-BRL	1	VNBC	67.68	%	0.08	BRL	05-0279
2005-04	NAPRIVUP	19-Apr-05	2TE	0ANC	% Solids - SED-TE-BRL	1	VNBC	61.06	%	0.08	BRL	05-0279
2005-04	PETRIVUP	20-Apr-05	2TE	0ANC	% Solids - SED-TE-BRL	1	VNBC	58.29	%	0.08	BRL	05-0279
2005-04	SANLORCRKUP	20-Apr-05	2TE	0ANC	% Solids - SED-TE-BRL	1	VNBC	50.26	%	0.08	BRL	05-0279
2005-04	SANMATCRKLWR	18-Apr-05	2TE	0ANC	% Solids - SED-TE-BRL	1	VNBC	26.03	%	0.08	BRL	05-0279
2005-04	SANMATCRKUP	18-Apr-05	2TE	0ANC	% Solids - SED-TE-BRL	1	VNBC	41.29	%	0.08	BRL	05-0279
2005-04	SUICRKUP	19-Apr-05	2TE	0ANC	% Solids - SED-TE-BRL	2	VNBC	69.72	%	0.08	BRL	05-0279
2004-11	COYCRKUP	01-Nov-04	2TE	0ANC	% Solids - SED-TE-BRL-TE2	1	VNBC	74.91	%	0.06	BRL	05-0074
2004-11	NAPRIVUP	02-Nov-04	2TE	0ANC	% Solids - SED-TE-BRL-TE2	1	VNBC	66.38	%	0.06	BRL	05-0074
2004-11	PETRIVUP	02-Nov-04	2TE	0ANC	% Solids - SED-TE-BRL-TE2	1	VNBC	55.66	%	0.06	BRL	05-0074
2004-11	SANLORCRKUP	03-Nov-04	2TE	0ANC	% Solids - SED-TE-BRL-TE2	1	VNBC	78.78	%	0.06	BRL	05-0074
2004-11	SANMATCRKLWR	04-Nov-04	2TE	0ANC	% Solids - SED-TE-BRL-TE2	1	VNBC	42.65	%	0.06	BRL	05-0074
2004-11	SANMATCRKUP	04-Nov-04	2TE	0ANC	% Solids - SED-TE-BRL-TE2	2	VNBC	70.08	%	0.06	BRL	05-0074
2004-11	SUICRKUP	03-Nov-04	2TE	0ANC	% Solids - SED-TE-BRL-TE2	1	VNBC	61.75	%	0.06	BRL	05-0074

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	COYCRKLWR	01-Nov-04	2TE	0ANC	% Solids - SED-TE-UCSCDET	1	VNBC	58.17	%		UCSCDET	EPW_UCSCDETANC
2004-11	COYCRKUP	01-Nov-04	2TE	0ANC	% Solids - SED-TE-UCSCDET	1	VNBC	67.11	%		UCSCDET	EPW_UCSCDETANC
2004-11	NAPRIVLWR	02-Nov-04	2TE	0ANC	% Solids - SED-TE-UCSCDET	1	VNBC	47.05	%		UCSCDET	EPW_UCSCDETANC
2004-11	NAPRIVUP	02-Nov-04	2TE	0ANC	% Solids - SED-TE-UCSCDET	1	VNBC	60.94	%		UCSCDET	EPW_UCSCDETANC
2004-11	PETRIVLWR	02-Nov-04	2TE	0ANC	% Solids - SED-TE-UCSCDET	1	VNBC	35.62	%		UCSCDET	EPW_UCSCDETANC
2004-11	PETRIVUP	02-Nov-04	2TE	0ANC	% Solids - SED-TE-UCSCDET	1	VNBC	45.78	%		UCSCDET	EPW_UCSCDETANC
2004-11	SANLORCRKLWR	03-Nov-04	2TE	0ANC	% Solids - SED-TE-UCSCDET	1	VNBC	55.73	%		UCSCDET	EPW_UCSCDETANC
2004-11	SANLORCRKUP	03-Nov-04	2TE	0ANC	% Solids - SED-TE-UCSCDET	1	VNBC	65.10	%		UCSCDET	EPW_UCSCDETANC
2004-11	SANMATCRKLWR	04-Nov-04	2TE	0ANC	% Solids - SED-TE-UCSCDET	2	VNBC	34.08	%		UCSCDET	EPW_UCSCDETANC
2004-11	SANMATCRKUP	04-Nov-04	2TE	0ANC	% Solids - SED-TE-UCSCDET	1	VNBC	62.00	%		UCSCDET	EPW_UCSCDETANC
2004-11	SANMATCRKUP-SUB	04-Nov-04	2TE	0ANC	% Solids - SED-TE-UCSCDET	1	VNBC	62.00	%		UCSCDET	EPW_UCSCDETANC
2004-11	SUICRKLWR	03-Nov-04	2TE	0ANC	% Solids - SED-TE-UCSCDET	1	VNBC	43.98	%		UCSCDET	EPW_UCSCDETANC
2004-11	SUICRKUP	03-Nov-04	2TE	0ANC	% Solids - SED-TE-UCSCDET	1	VNBC	43.19	%		UCSCDET	EPW_UCSCDETANC
2005-04	COYCRKLWR	18-Apr-05	2TE	0ANC	% Solids - SED-TE-UCSCDET	3	VNBC	53.14	%		UCSCDET	EPTOX05
2005-04	COYCRKUP	18-Apr-05	2TE	0ANC	% Solids - SED-TE-UCSCDET	1	VNBC	64.65	%		UCSCDET	EPTOX05
2005-04	NAPRIVLWR	19-Apr-05	2TE	0ANC	% Solids - SED-TE-UCSCDET	3	VNBC	37.50	%		UCSCDET	EPTOX05
2005-04	NAPRIVUP	19-Apr-05	2TE	0ANC	% Solids - SED-TE-UCSCDET	3	VNBC	62.50	%		UCSCDET	EPTOX05
2005-04	PETRIVLWR	20-Apr-05	2TE	0ANC	% Solids - SED-TE-UCSCDET	1	VNBC	45.54	%		UCSCDET	EPTOX05
2005-04	PETRIVUP	20-Apr-05	2TE	0ANC	% Solids - SED-TE-UCSCDET	1	VNBC	53.89	%		UCSCDET	EPTOX05
2005-04	SANLORCRKLWR	20-Apr-05	2TE	0ANC	% Solids - SED-TE-	1	VNBC	66.39	%		UCSCDET	EPTOX05

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
					UCSCDET							
2005-04	SANLORCRKUP	20-Apr-05	2TE	0ANC	% Solids - SED-TE-UCSCDET	1	VNBC	49.37	%		UCSCDET	EPTOX05
2005-04	SANMATCRKLWR	18-Apr-05	2TE	0ANC	% Solids - SED-TE-UCSCDET	1	VNBC	26.64	%		UCSCDET	EPTOX05
2005-04	SANMATCRKUP	18-Apr-05	2TE	0ANC	% Solids - SED-TE-UCSCDET	1	VNBC	41.18	%		UCSCDET	EPTOX05
2005-04	SUICRKLWR	19-Apr-05	2TE	0ANC	% Solids - SED-TE-UCSCDET	1	VNBC	50.12	%		UCSCDET	EPTOX05
2005-04	SUICRKUP	19-Apr-05	2TE	0ANC	% Solids - SED-TE-UCSCDET	1	VNBC	68.93	%		UCSCDET	EPTOX05
2004-11	COYCRKUP	01-Nov-04	2TE	TE	Ag	1	X	0.19	mg/kg	0.00	BRL	05-0073-1
2004-11	NAPRIVUP	02-Nov-04	2TE	TE	Ag	1	X	0.38	mg/kg	0.00	BRL	05-0073-1
2004-11	PETRIVUP	02-Nov-04	2TE	TE	Ag	1	X	0.29	mg/kg	0.00	BRL	05-0073-1
2004-11	SANLORCRKUP	03-Nov-04	2TE	TE	Ag	1	X	0.17	mg/kg	0.00	BRL	05-0073-1
2004-11	SANMATCRKLWR	04-Nov-04	2TE	TE	Ag	1	X	0.70	mg/kg	0.00	BRL	05-0073-1
2004-11	SANMATCRKUP	04-Nov-04	2TE	TE	Ag	1	X	0.28	mg/kg	0.00	BRL	05-0073-1
2004-11	SUICRKUP	03-Nov-04	2TE	TE	Ag	1	X	0.24	mg/kg	0.00	BRL	05-0073-1
2005-04	COYCRKUP	18-Apr-05	2TE	TE	Ag	2	VIP,X	0.24	mg/kg	0.00	BRL	05-0278
2005-04	NAPRIVUP	19-Apr-05	2TE	TE	Ag	1	VIP,X	0.62	mg/kg	0.00	BRL	05-0278
2005-04	PETRIVUP	20-Apr-05	2TE	TE	Ag	1	VIP,X	0.30	mg/kg	0.00	BRL	05-0278
2005-04	SANLORCRKUP	20-Apr-05	2TE	TE	Ag	1	VIP,X	0.35	mg/kg	0.00	BRL	05-0278
2005-04	SANMATCRKLWR	18-Apr-05	2TE	TE	Ag	1	VIP,X	0.68	mg/kg	0.00	BRL	05-0278
2005-04	SANMATCRKUP	18-Apr-05	2TE	TE	Ag	1	VIP,X	0.39	mg/kg	0.00	BRL	05-0278
2005-04	SUICRKUP	19-Apr-05	2TE	TE	Ag	1	VIP,X	0.28	mg/kg	0.00	BRL	05-0278
2004-11	COYCRKUP	01-Nov-04	2TE	TE	Al	1	VIU	46027.23	mg/kg	1.40	BRL	05-0073-2
2004-11	NAPRIVUP	02-Nov-04	2TE	TE	Al	1	VIU	36175.05	mg/kg	1.40	BRL	05-0073-2
2004-11	PETRIVUP	02-Nov-04	2TE	TE	Al	1	VIU	40923.46	mg/kg	1.40	BRL	05-0073-2
2004-11	SANLORCRKUP	03-Nov-04	2TE	TE	Al	1	VIU	44635.69	mg/kg	1.40	BRL	05-0073-2
2004-11	SANMATCRKLWR	04-Nov-04	2TE	TE	Al	1	VIU	54560.00	mg/kg	1.40	BRL	05-0073-2
2004-11	SANMATCRKUP	04-Nov-04	2TE	TE	Al	3	VIU	42260.42	mg/kg	1.40	BRL	05-0073-2
2004-11	SUICRKUP	03-Nov-04	2TE	TE	Al	1	VIU	56699.60	mg/kg	1.40	BRL	05-0073-2

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	COYCRKUP	18-Apr-05	2TE	TE	Al	2	X	49859.63	mg/kg	70.00	BRL	05-0278
2005-04	NAPRIVUP	19-Apr-05	2TE	TE	Al	1	X	66819.52	mg/kg	70.00	BRL	05-0278
2005-04	PETRIVUP	20-Apr-05	2TE	TE	Al	1	X	58157.49	mg/kg	70.00	BRL	05-0278
2005-04	SANLORCRKUP	20-Apr-05	2TE	TE	Al	1	X	41583.76	mg/kg	70.00	BRL	05-0278
2005-04	SANMATCRKLWR	18-Apr-05	2TE	TE	Al	1	X	89127.93	mg/kg	70.00	BRL	05-0278
2005-04	SANMATCRKUP	18-Apr-05	2TE	TE	Al	1	X	64422.38	mg/kg	70.00	BRL	05-0278
2005-04	SUICRKUP	19-Apr-05	2TE	TE	Al	1	X	53838.34	mg/kg	70.00	BRL	05-0278
2004-11	COYCRKUP	01-Nov-04	2TE	TE	As	1	VNBC	3.06	mg/kg	0.10	BRL	04-1050-1
2004-11	NAPRIVUP	02-Nov-04	2TE	TE	As	1	VNBC	5.37	mg/kg	0.10	BRL	04-1050-1
2004-11	PETRIVUP	02-Nov-04	2TE	TE	As	1	VNBC	2.91	mg/kg	0.10	BRL	04-1050-1
2004-11	SANLORCRKUP	03-Nov-04	2TE	TE	As	1	VNBC	2.53	mg/kg	0.10	BRL	04-1050-1
2004-11	SANMATCRKLWR	04-Nov-04	2TE	TE	As	2	VNBC	7.34	mg/kg	0.10	BRL	05-0075-1
2004-11	SANMATCRKUP	04-Nov-04	2TE	TE	As	2	VNBC	2.80	mg/kg	0.10	BRL	04-1050-1
2004-11	SUICRKUP	03-Nov-04	2TE	TE	As	1	VNBC	3.99	mg/kg	0.10	BRL	04-1050-1
2005-04	COYCRKUP	18-Apr-05	2TE	TE	As	2	VNBC,X	5.20	mg/kg	0.10	BRL	05-0281-2
2005-04	NAPRIVUP	19-Apr-05	2TE	TE	As	1	VNBC,X	6.98	mg/kg	0.10	BRL	05-0281-2
2005-04	PETRIVUP	20-Apr-05	2TE	TE	As	1	VNBC,X	4.56	mg/kg	0.10	BRL	05-0281-2
2005-04	SANLORCRKUP	20-Apr-05	2TE	TE	As	2	VNBC,X	4.67	mg/kg	0.10	BRL	05-0281-2
2005-04	SANMATCRKLWR	18-Apr-05	2TE	TE	As	1	VNBC,X	10.91	mg/kg	0.10	BRL	05-0281-2
2005-04	SANMATCRKUP	18-Apr-05	2TE	TE	As	1	VNBC,X	5.96	mg/kg	0.10	BRL	05-0281-2
2005-04	SUICRKUP	19-Apr-05	2TE	TE	As	1	VNBC,X	9.55	mg/kg	0.10	BRL	05-0281-2
2004-11	COYCRKUP	01-Nov-04	2TE	TE	Cd	1	X	0.32	mg/kg	0.00	BRL	05-0073-1
2004-11	NAPRIVUP	02-Nov-04	2TE	TE	Cd	1	X	0.19	mg/kg	0.00	BRL	05-0073-1
2004-11	PETRIVUP	02-Nov-04	2TE	TE	Cd	1	X	0.21	mg/kg	0.00	BRL	05-0073-1
2004-11	SANLORCRKUP	03-Nov-04	2TE	TE	Cd	1	X	0.17	mg/kg	0.00	BRL	05-0073-1
2004-11	SANMATCRKLWR	04-Nov-04	2TE	TE	Cd	1	X	0.39	mg/kg	0.00	BRL	05-0073-1
2004-11	SANMATCRKUP	04-Nov-04	2TE	TE	Cd	1	X	0.26	mg/kg	0.00	BRL	05-0073-1
2004-11	SUICRKUP	03-Nov-04	2TE	TE	Cd	1	X	0.13	mg/kg	0.00	BRL	05-0073-1
2005-04	COYCRKUP	18-Apr-05	2TE	TE	Cd	2	VRIU		mg/kg	0.00	BRL	05-0278
2005-04	NAPRIVUP	19-Apr-05	2TE	TE	Cd	1	VRIU		mg/kg	0.00	BRL	05-0278

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	PETRIVUP	20-Apr-05	2TE	TE	Cd	1	VRIU		mg/kg	0.00	BRL	05-0278
2005-04	SANLORCRKUP	20-Apr-05	2TE	TE	Cd	1	VRIU		mg/kg	0.00	BRL	05-0278
2005-04	SANMATCRKLWR	18-Apr-05	2TE	TE	Cd	1	VRIU		mg/kg	0.00	BRL	05-0278
2005-04	SANMATCRKUP	18-Apr-05	2TE	TE	Cd	1	VRIU		mg/kg	0.00	BRL	05-0278
2005-04	SUICRKUP	19-Apr-05	2TE	TE	Cd	1	VRIU		mg/kg	0.00	BRL	05-0278
2004-11	COYCRKUP	01-Nov-04	2TE	TE	Cu	1	X	27.20	mg/kg	0.04	BRL	05-0073-1
2004-11	NAPRIVUP	02-Nov-04	2TE	TE	Cu	1	X	33.40	mg/kg	0.04	BRL	05-0073-1
2004-11	PETRIVUP	02-Nov-04	2TE	TE	Cu	1	X	34.30	mg/kg	0.04	BRL	05-0073-1
2004-11	SANLORCRKUP	03-Nov-04	2TE	TE	Cu	1	X	20.10	mg/kg	0.04	BRL	05-0073-1
2004-11	SANMATCRKLWR	04-Nov-04	2TE	TE	Cu	1	X	34.30	mg/kg	0.04	BRL	05-0073-1
2004-11	SANMATCRKUP	04-Nov-04	2TE	TE	Cu	1	X	41.40	mg/kg	0.04	BRL	05-0073-1
2004-11	SUICRKUP	03-Nov-04	2TE	TE	Cu	1	X	56.80	mg/kg	0.04	BRL	05-0073-1
2005-04	COYCRKUP	18-Apr-05	2TE	TE	Cu	2	VIP,X	29.03	mg/kg	0.04	BRL	05-0278
2005-04	NAPRIVUP	19-Apr-05	2TE	TE	Cu	1	VIP,X	51.42	mg/kg	0.04	BRL	05-0278
2005-04	PETRIVUP	20-Apr-05	2TE	TE	Cu	1	VIP,X	38.94	mg/kg	0.04	BRL	05-0278
2005-04	SANLORCRKUP	20-Apr-05	2TE	TE	Cu	1	VIP,X	34.02	mg/kg	0.04	BRL	05-0278
2005-04	SANMATCRKLWR	18-Apr-05	2TE	TE	Cu	1	VIP,X	78.37	mg/kg	0.04	BRL	05-0278
2005-04	SANMATCRKUP	18-Apr-05	2TE	TE	Cu	1	VIP,X	67.33	mg/kg	0.04	BRL	05-0278
2005-04	SUICRKUP	19-Apr-05	2TE	TE	Cu	1	VIP,X	51.50	mg/kg	0.04	BRL	05-0278
2004-11	COYCRKUP	01-Nov-04	2TE	TE	Fe	1	X	22167.93	mg/kg	5.60	BRL	05-0073-1
2004-11	NAPRIVUP	02-Nov-04	2TE	TE	Fe	1	X	23157.58	mg/kg	5.60	BRL	05-0073-1
2004-11	PETRIVUP	02-Nov-04	2TE	TE	Fe	1	X	32694.93	mg/kg	5.60	BRL	05-0073-1
2004-11	SANLORCRKUP	03-Nov-04	2TE	TE	Fe	1	X	9313.00	mg/kg	5.60	BRL	05-0073-1
2004-11	SANMATCRKLWR	04-Nov-04	2TE	TE	Fe	1	X	32695.00	mg/kg	5.60	BRL	05-0073-1
2004-11	SANMATCRKUP	04-Nov-04	2TE	TE	Fe	1	X	21237.86	mg/kg	5.60	BRL	05-0073-1
2004-11	SUICRKUP	03-Nov-04	2TE	TE	Fe	1	X	30252.63	mg/kg	5.60	BRL	05-0073-1
2005-04	COYCRKUP	18-Apr-05	2TE	TE	Fe	2	X	25258.57	mg/kg	280.00	BRL	05-0278
2005-04	NAPRIVUP	19-Apr-05	2TE	TE	Fe	1	X	39305.60	mg/kg	280.00	BRL	05-0278
2005-04	PETRIVUP	20-Apr-05	2TE	TE	Fe	1	X	33796.53	mg/kg	280.00	BRL	05-0278
2005-04	SANLORCRKUP	20-Apr-05	2TE	TE	Fe	1	X	18901.71	mg/kg	280.00	BRL	05-0278

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SANMATCRKLWR	18-Apr-05	2TE	TE	Fe	1	X	60315.02	mg/kg	280.00	BRL	05-0278
2005-04	SANMATCRKUP	18-Apr-05	2TE	TE	Fe	1	X	36328.41	mg/kg	280.00	BRL	05-0278
2005-04	SUICRKUP	19-Apr-05	2TE	TE	Fe	1	X	38891.31	mg/kg	280.00	BRL	05-0278
2004-11	COYCRKLWR	01-Nov-04	2TE	TE	Hg	1	VNBC	0.13	mg/kg	0.00	UCSCDET	UCSCDET-7/28/05-Sediment-HgTot
2004-11	COYCRKUP	01-Nov-04	2TE	TE	Hg	1	VNBC	0.11	mg/kg	0.00	UCSCDET	UCSCDET-7/28/05-Sediment-HgTot
2004-11	NAPRIVLWR	02-Nov-04	2TE	TE	Hg	1	VNBC	0.35	mg/kg	0.00	UCSCDET	UCSCDET-7/28/05-Sediment-HgTot
2004-11	NAPRIVUP	02-Nov-04	2TE	TE	Hg	1	VNBC	0.70	mg/kg	0.00	UCSCDET	UCSCDET-7/28/05-Sediment-HgTot
2004-11	PETRIVLWR	02-Nov-04	2TE	TE	Hg	1	VNBC	0.70	mg/kg	0.00	UCSCDET	UCSCDET-7/28/05-Sediment-HgTot
2004-11	PETRIVUP	02-Nov-04	2TE	TE	Hg	1	VNBC	0.30	mg/kg	0.00	UCSCDET	UCSCDET-7/28/05-Sediment-HgTot
2004-11	SANLORCRKLWR	03-Nov-04	2TE	TE	Hg	1	VNBC	0.08	mg/kg	0.00	UCSCDET	UCSCDET-7/28/05-Sediment-HgTot
2004-11	SANLORCRKUP	03-Nov-04	2TE	TE	Hg	1	VNBC	0.05	mg/kg	0.00	UCSCDET	UCSCDET-7/28/05-Sediment-HgTot
2004-11	SANMATCRKLWR	04-Nov-04	2TE	TE	Hg	1	VNBC	0.25	mg/kg	0.00	UCSCDET	UCSCDET-7/28/05-Sediment-HgTot
2004-11	SANMATCRKUP	04-Nov-04	2TE	TE	Hg	1	VNBC	0.14	mg/kg	0.00	UCSCDET	UCSCDET-7/28/05-Sediment-HgTot
2004-11	SANMATCRKUP-SUB	04-Nov-04	2TE	TE	Hg	1	VNBC	0.24	mg/kg	0.00	UCSCDET	UCSCDET-7/28/05-Sediment-HgTot
2004-11	SUICRKLWR	03-Nov-04	2TE	TE	Hg	1	VNBC	0.20	mg/kg	0.00	UCSCDET	UCSCDET-7/28/05-Sediment-HgTot
2004-11	SUICRKUP	03-Nov-04	2TE	TE	Hg	1	VNBC	0.06	mg/kg	0.00	UCSCDET	UCSCDET-7/28/05-Sediment-HgTot
2005-04	COYCRKLWR	18-Apr-05	2TE	TE	Hg	3	VNBC	0.17	mg/kg	0.00	UCSCDET	UCSCDET-7/28/05-Sediment-HgTot
2005-04	COYCRKUP	18-Apr-05	2TE	TE	Hg	1	VNBC	0.07	mg/kg	0.00	UCSCDET	UCSCDET-7/28/05-Sediment-HgTot
2005-04	NAPRIVLWR	19-Apr-05	2TE	TE	Hg	3	BRKA,VNBC	0.28	mg/kg	0.00	UCSCDET	UCSCDET-7/28/05-Sediment-HgTot
2005-04	NAPRIVUP	19-Apr-05	2TE	TE	Hg	2	BRKA,VNBC	1.53	mg/kg	0.00	UCSCDET	UCSCDET-7/28/05-Sediment-HgTot
2005-04	PETRIVLWR	20-Apr-05	2TE	TE	Hg	1	VNBC	0.33	mg/kg	0.00	UCSCDET	UCSCDET-7/28/05-Sediment-

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
												HgTot
2005-04	PETRIVUP	20-Apr-05	2TE	TE	Hg	2	VNBC	0.30	mg/kg	0.00	UCSCDET	UCSCDET-7/28/05-Sediment-HgTot
2005-04	SANLORCRKLWR	20-Apr-05	2TE	TE	Hg	1	VNBC	0.03	mg/kg	0.00	UCSCDET	UCSCDET-7/28/05-Sediment-HgTot
2005-04	SANLORCRKUP	20-Apr-05	2TE	TE	Hg	1	VNBC	0.05	mg/kg	0.00	UCSCDET	UCSCDET-7/28/05-Sediment-HgTot
2005-04	SANMATCRKLWR	18-Apr-05	2TE	TE	Hg	1	VNBC	0.28	mg/kg	0.00	UCSCDET	UCSCDET-7/28/05-Sediment-HgTot
2005-04	SANMATCRKUP	18-Apr-05	2TE	TE	Hg	1	VNBC	0.15	mg/kg	0.00	UCSCDET	UCSCDET-7/28/05-Sediment-HgTot
2005-04	SUICRKLWR	19-Apr-05	2TE	TE	Hg	1	BRKA,VNBC	0.14	mg/kg	0.00	UCSCDET	UCSCDET-7/28/05-Sediment-HgTot
2005-04	SUICRKUP	19-Apr-05	2TE	TE	Hg	1	VNBC	0.04	mg/kg	0.00	UCSCDET	UCSCDET-7/28/05-Sediment-HgTot
2004-11	COYCRKLWR	01-Nov-04	2TE	TE	MeHg	1	VJ	0.83	ug/kg	0.02	UCSCDET	EPW04_UCSCDETMEHG
2004-11	COYCRKUP	01-Nov-04	2TE	TE	MeHg	1	X	0.05	ug/kg	0.02	UCSCDET	EPW04_UCSCDETMEHG
2004-11	NAPRIVLWR	02-Nov-04	2TE	TE	MeHg	1	VJ	0.68	ug/kg	0.04	UCSCDET	EPW04_UCSCDETMEHG
2004-11	NAPRIVUP	02-Nov-04	2TE	TE	MeHg	1	VJ	0.21	ug/kg	0.02	UCSCDET	EPW04_UCSCDETMEHG
2004-11	PETRIVLWR	02-Nov-04	2TE	TE	MeHg	1	X	0.15	ug/kg	0.05	UCSCDET	EPW04_UCSCDETMEHG
2004-11	PETRIVUP	02-Nov-04	2TE	TE	MeHg	1	X	1.18	ug/kg	0.04	UCSCDET	EPW04_UCSCDETMEHG
2004-11	SANLORCRKLWR	03-Nov-04	2TE	TE	MeHg	1	NA X		ug/kg		UCSCDET	EPW04_UCSCDETMEHG
2004-11	SANLORCRKUP	03-Nov-04	2TE	TE	MeHg	1	X	0.05	ug/kg	0.02	UCSCDET	EPW04_UCSCDETMEHG
2004-11	SANMATCRKLWR	04-Nov-04	2TE	TE	MeHg	2	X	2.41	ug/kg	0.04	UCSCDET	EPW04_UCSCDETMEHG
2004-11	SANMATCRKUP	04-Nov-04	2TE	TE	MeHg	1	X	1.35	ug/kg	0.01	UCSCDET	EPW04_UCSCDETMEHG
2004-11	SUICRKLWR	03-Nov-04	2TE	TE	MeHg	1	X	2.19	ug/kg	0.03	UCSCDET	EPW04_UCSCDETMEHG
2004-11	SUICRKUP	03-Nov-04	2TE	TE	MeHg	1	VJ	0.18	ug/kg	0.04	UCSCDET	EPW04_UCSCDETMEHG
2005-04	COYCRKLWR	18-Apr-05	2TE	TE	MeHg	4	VNBC,X	0.72	ug/kg	0.00	UCSCDET	EPTOX05
2005-04	COYCRKUP	18-Apr-05	2TE	TE	MeHg	1	VNBC,X	0.77	ug/kg	0.00	UCSCDET	EPTOX05
2005-04	NAPRIVLWR	19-Apr-05	2TE	TE	MeHg	1	VNBC,X	3.10	ug/kg	0.01	UCSCDET	EPTOX05
2005-04	NAPRIVUP	19-Apr-05	2TE	TE	MeHg	1	VNBC,X	0.45	ug/kg	0.00	UCSCDET	EPTOX05
2005-04	PETRIVLWR	20-Apr-05	2TE	TE	MeHg	2	ND VNBC,X	0.09	ug/kg	0.00	UCSCDET	EPTOX05
2005-04	PETRIVUP	20-Apr-05	2TE	TE	MeHg	1	VNBC,X	1.54	ug/kg	0.00	UCSCDET	EPTOX05

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SANLORCRKLWR	20-Apr-05	2TE	TE	MeHg	1	VNBC,X	0.49	ug/kg	0.00	UCSCDET	EPTOX05
2005-04	SANLORCRKUP	20-Apr-05	2TE	TE	MeHg	1	VNBC,X	0.30	ug/kg	0.00	UCSCDET	EPTOX05
2005-04	SANMATCRKLWR	18-Apr-05	2TE	TE	MeHg	1	VNBC,X	5.15	ug/kg	0.01	UCSCDET	EPTOX05
2005-04	SANMATCRKUP	18-Apr-05	2TE	TE	MeHg	1	VNBC,X	5.31	ug/kg	0.00	UCSCDET	EPTOX05
2005-04	SUICRKLWR	19-Apr-05	2TE	TE	MeHg	1	VNBC,X	0.81	ug/kg	0.00	UCSCDET	EPTOX05
2005-04	SUICRKUP	19-Apr-05	2TE	TE	MeHg	1	VNBC,X	0.34	ug/kg	0.00	UCSCDET	EPTOX05
2004-11	COYCRKUP	01-Nov-04	2TE	TE	Mn	1	X	523.00	mg/kg	0.06	BRL	05-0073-2
2004-11	NAPRIVUP	02-Nov-04	2TE	TE	Mn	1	X	845.00	mg/kg	0.06	BRL	05-0073-2
2004-11	PETRIVUP	02-Nov-04	2TE	TE	Mn	1	X	686.00	mg/kg	0.06	BRL	05-0073-2
2004-11	SANLORCRKUP	03-Nov-04	2TE	TE	Mn	1	X	364.00	mg/kg	0.06	BRL	05-0073-2
2004-11	SANMATCRKLWR	04-Nov-04	2TE	TE	Mn	1	X	778.00	mg/kg	0.06	BRL	05-0073-2
2004-11	SANMATCRKUP	04-Nov-04	2TE	TE	Mn	1	X	567.00	mg/kg	0.06	BRL	05-0073-2
2004-11	SUICRKUP	03-Nov-04	2TE	TE	Mn	1	X	1134.00	mg/kg	0.06	BRL	05-0073-2
2005-04	COYCRKUP	18-Apr-05	2TE	TE	Mn	2	VIP,X	531.62	mg/kg	0.05	BRL	05-0278
2005-04	NAPRIVUP	19-Apr-05	2TE	TE	Mn	1	VIP,X	816.00	mg/kg	0.05	BRL	05-0278
2005-04	PETRIVUP	20-Apr-05	2TE	TE	Mn	1	VIP,X	1115.11	mg/kg	0.05	BRL	05-0278
2005-04	SANLORCRKUP	20-Apr-05	2TE	TE	Mn	1	VIP,X	646.64	mg/kg	0.05	BRL	05-0278
2005-04	SANMATCRKLWR	18-Apr-05	2TE	TE	Mn	1	VIP,X	749.14	mg/kg	0.05	BRL	05-0278
2005-04	SANMATCRKUP	18-Apr-05	2TE	TE	Mn	1	VIP,X	842.82	mg/kg	0.05	BRL	05-0278
2005-04	SUICRKUP	19-Apr-05	2TE	TE	Mn	1	VIP,X	837.32	mg/kg	0.05	BRL	05-0278
2004-11	COYCRKUP	01-Nov-04	2TE	TE	Ni	1	VIU	83.20	mg/kg	0.04	BRL	05-0073-1
2004-11	NAPRIVUP	02-Nov-04	2TE	TE	Ni	1	VIU	54.70	mg/kg	0.04	BRL	05-0073-1
2004-11	PETRIVUP	02-Nov-04	2TE	TE	Ni	1	VIU	63.80	mg/kg	0.04	BRL	05-0073-1
2004-11	SANLORCRKUP	03-Nov-04	2TE	TE	Ni	1	VIU	9.33	mg/kg	0.04	BRL	05-0073-1
2004-11	SANMATCRKLWR	04-Nov-04	2TE	TE	Ni	1	VIU	124.00	mg/kg	0.04	BRL	05-0073-1
2004-11	SANMATCRKUP	04-Nov-04	2TE	TE	Ni	1	VIU	125.00	mg/kg	0.04	BRL	05-0073-1
2004-11	SUICRKUP	03-Nov-04	2TE	TE	Ni	1	VIU	33.20	mg/kg	0.04	BRL	05-0073-1
2005-04	COYCRKUP	18-Apr-05	2TE	TE	Ni	2	VIP,X	86.73	mg/kg	0.04	BRL	05-0278
2005-04	NAPRIVUP	19-Apr-05	2TE	TE	Ni	1	VIP,X	97.61	mg/kg	0.04	BRL	05-0278
2005-04	PETRIVUP	20-Apr-05	2TE	TE	Ni	1	X	69.31	mg/kg	0.04	BRL	05-0278

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SANLORCRKUP	20-Apr-05	2TE	TE	Ni	1	VIP,X	32.83	mg/kg	0.04	BRL	05-0278
2005-04	SANMATCRKLWR	18-Apr-05	2TE	TE	Ni	1	VIP,X	149.83	mg/kg	0.04	BRL	05-0278
2005-04	SANMATCRKUP	18-Apr-05	2TE	TE	Ni	1	VIP,X	196.66	mg/kg	0.04	BRL	05-0278
2005-04	SUICRKUP	19-Apr-05	2TE	TE	Ni	1	VIP,X	61.17	mg/kg	0.04	BRL	05-0278
2004-11	COYCRKUP	01-Nov-04	2TE	TE	Pb	1	VIL	23.00	mg/kg	0.01	BRL	05-0073-1
2004-11	NAPRIVUP	02-Nov-04	2TE	TE	Pb	1	VIL	63.00	mg/kg	0.01	BRL	05-0073-1
2004-11	PETRIVUP	02-Nov-04	2TE	TE	Pb	1	VIL	36.80	mg/kg	0.01	BRL	05-0073-1
2004-11	SANLORCRKUP	03-Nov-04	2TE	TE	Pb	1	VIL	18.80	mg/kg	0.01	BRL	05-0073-1
2004-11	SANMATCRKLWR	04-Nov-04	2TE	TE	Pb	1	VIL	58.60	mg/kg	0.01	BRL	05-0073-1
2004-11	SANMATCRKUP	04-Nov-04	2TE	TE	Pb	1	VIL	48.30	mg/kg	0.01	BRL	05-0073-1
2004-11	SUICRKUP	03-Nov-04	2TE	TE	Pb	1	VIL	18.50	mg/kg	0.01	BRL	05-0073-1
2005-04	COYCRKUP	18-Apr-05	2TE	TE	Pb	2	X	18.62	mg/kg	0.01	BRL	05-0278
2005-04	NAPRIVUP	19-Apr-05	2TE	TE	Pb	1	X	87.13	mg/kg	0.01	BRL	05-0278
2005-04	PETRIVUP	20-Apr-05	2TE	TE	Pb	1	X	33.80	mg/kg	0.01	BRL	05-0278
2005-04	SANLORCRKUP	20-Apr-05	2TE	TE	Pb	1	X	42.98	mg/kg	0.01	BRL	05-0278
2005-04	SANMATCRKLWR	18-Apr-05	2TE	TE	Pb	1	X	48.79	mg/kg	0.01	BRL	05-0278
2005-04	SANMATCRKUP	18-Apr-05	2TE	TE	Pb	1	X	52.56	mg/kg	0.01	BRL	05-0278
2005-04	SUICRKUP	19-Apr-05	2TE	TE	Pb	1	X	20.90	mg/kg	0.01	BRL	05-0278
2004-11	COYCRKUP	01-Nov-04	2TE	TE	Se	1	VIU,VNBC	0.35	mg/kg	0.00	BRL	04-1036-1
2004-11	NAPRIVUP	02-Nov-04	2TE	TE	Se	1	VIU,VNBC	0.09	mg/kg	0.00	BRL	04-1036-1
2004-11	PETRIVUP	02-Nov-04	2TE	TE	Se	1	VIU,VNBC	0.12	mg/kg	0.00	BRL	04-1036-1
2004-11	SANLORCRKUP	03-Nov-04	2TE	TE	Se	1	VIU,VNBC	0.68	mg/kg	0.00	BRL	04-1036-1
2004-11	SANMATCRKLWR	04-Nov-04	2TE	TE	Se	2	VIU,VNBC	0.38	mg/kg	0.00	BRL	05-0076-5
2004-11	SANMATCRKUP	04-Nov-04	2TE	TE	Se	2	VIU,VNBC	0.06	mg/kg	0.00	BRL	04-1036-1
2004-11	SUICRKUP	03-Nov-04	2TE	TE	Se	1	VIU,VNBC	0.17	mg/kg	0.00	BRL	04-1036-1
2005-04	COYCRKUP	18-Apr-05	2TE	TE	Se	1	X	0.13	mg/kg	0.01	BRL	05-0284-1
2005-04	NAPRIVUP	19-Apr-05	2TE	TE	Se	2	X	0.11	mg/kg	0.01	BRL	05-0284-1
2005-04	PETRIVUP	20-Apr-05	2TE	TE	Se	1	X	0.07	mg/kg	0.01	BRL	05-0284-1
2005-04	SANLORCRKUP	20-Apr-05	2TE	TE	Se	1	X	0.16	mg/kg	0.01	BRL	05-0284-1
2005-04	SANMATCRKLWR	18-Apr-05	2TE	TE	Se	1	X	0.11	mg/kg	0.01	BRL	05-0284-1

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SANMATCRKUP	18-Apr-05	2TE	TE	Se	1	X	0.06	mg/kg	0.01	BRL	05-0284-1
2005-04	SUICRKUP	19-Apr-05	2TE	TE	Se	1	X	0.17	mg/kg	0.01	BRL	05-0284-1
2004-11	COYCRKUP	01-Nov-04	2TE	TE	Zn	1	X	123.00	mg/kg	0.08	BRL	05-0073-1
2004-11	NAPRIVUP	02-Nov-04	2TE	TE	Zn	1	X	123.00	mg/kg	0.08	BRL	05-0073-1
2004-11	PETRIVUP	02-Nov-04	2TE	TE	Zn	1	X	112.00	mg/kg	0.08	BRL	05-0073-1
2004-11	SANLORCRKUP	03-Nov-04	2TE	TE	Zn	1	X	62.50	mg/kg	0.08	BRL	05-0073-1
2004-11	SANMATCRKLWR	04-Nov-04	2TE	TE	Zn	1	X	198.00	mg/kg	0.08	BRL	05-0073-1
2004-11	SANMATCRKUP	04-Nov-04	2TE	TE	Zn	1	X	146.00	mg/kg	0.08	BRL	05-0073-1
2004-11	SUICRKUP	03-Nov-04	2TE	TE	Zn	1	X	90.00	mg/kg	0.08	BRL	05-0073-1
2005-04	COYCRKUP	18-Apr-05	2TE	TE	Zn	2	VIP,X	117.03	mg/kg	0.08	BRL	05-0278
2005-04	NAPRIVUP	19-Apr-05	2TE	TE	Zn	1	VIP,X	157.06	mg/kg	0.08	BRL	05-0278
2005-04	PETRIVUP	20-Apr-05	2TE	TE	Zn	1	X	133.99	mg/kg	0.08	BRL	05-0278
2005-04	SANLORCRKUP	20-Apr-05	2TE	TE	Zn	1	VIP,X	184.24	mg/kg	0.08	BRL	05-0278
2005-04	SANMATCRKLWR	18-Apr-05	2TE	TE	Zn	1	VIP,X	214.68	mg/kg	0.08	BRL	05-0278
2005-04	SANMATCRKUP	18-Apr-05	2TE	TE	Zn	1	VIP,X	228.38	mg/kg	0.08	BRL	05-0278
2005-04	SUICRKUP	19-Apr-05	2TE	TE	Zn	1	VIP,X	110.14	mg/kg	0.08	BRL	05-0278

Appendix Table C.3. Sediment trace organic results for PAHs from the ambient tributary study in watersheds of the San Francisco Estuary (2004-2005). N = number of replicates. % solids was reported by each analytical laboratory. DFG-WPCL analyzed all trace organic samples in this study.

Sum of PAHs (all target PAHs listed in table 1.3) and low molecular weight PAHs:

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	COYCRKLWR	18-Apr-05	3ORG	0ANC	% Solids - SED-ORG-CDFGWPCL	1	VNBC	53.10	%		DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	0ANC	% Solids - SED-ORG-CDFGWPCL	1	VNBC	75.90	%		DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	COYCRKUP	18-Apr-05	3ORG	0ANC	% Solids - SED-ORG-CDFGWPCL	2	VNBC	74.40	%		DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	0ANC	% Solids - SED-ORG-CDFGWPCL	1	VNBC	41.90	%		DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	0ANC	% Solids - SED-ORG-CDFGWPCL	1	VNBC	71.40	%		DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	NAPRIVUP	19-Apr-05	3ORG	0ANC	% Solids - SED-ORG-CDFGWPCL	1	VNBC	67.70	%		DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	0ANC	% Solids - SED-ORG-CDFGWPCL	1	VNBC	27.00	%		DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	0ANC	% Solids - SED-ORG-CDFGWPCL	2	VNBC	55.10	%		DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	PETRIVUP	20-Apr-05	3ORG	0ANC	% Solids - SED-ORG-CDFGWPCL	1	VNBC	54.00	%		DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	0ANC	% Solids - SED-ORG-CDFGWPCL	1	VNBC	69.90	%		DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	0ANC	% Solids - SED-ORG-CDFGWPCL	1	VNBC	74.80	%		DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	0ANC	% Solids - SED-ORG-CDFGWPCL	1	VNBC	55.90	%		DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	0ANC	% Solids - SED-ORG-CDFGWPCL	1	VNBC	42.30	%		DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	0ANC	% Solids - SED-ORG-CDFGWPCL	1	VNBC	31.10	%		DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	0ANC	% Solids - SED-ORG-CDFGWPCL	1	VNBC	69.40	%		DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	0ANC	% Solids - SED-ORG-CDFGWPCL	1	VNBC	54.30	%		DFG-WPCL	WPCL_L-192-05_BS373_KR_S_OCH
2005-04	SUICRKLWR	19-Apr-05	3ORG	0ANC	% Solids - SED-ORG-CDFGWPCL	1	VNBC	52.10	%		DFG-WPCL	WPCL_L-211-05_S_PAH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	SUICRKUP	03-Nov-04	3ORG	0ANC	% Solids - SED-ORG-CDFGWPCL	1	VNBC	64.90	%		DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SUICRKUP	19-Apr-05	3ORG	0ANC	% Solids - SED-ORG-CDFGWPCL	1	VNBC	72.00	%		DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	COYCRKLWR	18-Apr-05	3ORG	1APAH	Sum of PAHs (SFEI)	1	X	686.35	ug/kg	1.35	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	1APAH	Sum of PAHs (SFEI)	1	X	541.17	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	COYCRKUP	18-Apr-05	3ORG	1APAH	Sum of PAHs (SFEI)	2	X	266.75	ug/kg	1.03	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	1APAH	Sum of PAHs (SFEI)	1	X	441.69	ug/kg	1.84	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	1APAH	Sum of PAHs (SFEI)	1	X	240.16	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	NAPRIVUP	19-Apr-05	3ORG	1APAH	Sum of PAHs (SFEI)	1	X	232.95	ug/kg	1.13	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	1APAH	Sum of PAHs (SFEI)	1	X	1147.50	ug/kg	2.86	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	1APAH	Sum of PAHs (SFEI)	2	X	600.87	ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	PETRIVUP	20-Apr-05	3ORG	1APAH	Sum of PAHs (SFEI)	1	X	534.17	ug/kg	1.44	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	1APAH	Sum of PAHs (SFEI)	1	X	803.59	ug/kg	1.08	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	1APAH	Sum of PAHs (SFEI)	1	X	1103.86	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	1APAH	Sum of PAHs (SFEI)	1	X	3014.98	ug/kg	1.35	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	1APAH	Sum of PAHs (SFEI)	1	X	1643.47	ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	1APAH	Sum of PAHs (SFEI)	1	X	1549.76	ug/kg	2.43	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	1APAH	Sum of PAHs (SFEI)	1	X	3035.00	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	1APAH	Sum of PAHs (SFEI)	1	X	1603.55	ug/kg	1.42	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SUICRKLWR	19-Apr-05	3ORG	1APAH	Sum of PAHs (SFEI)	1	X	237.16	ug/kg	1.49	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	1APAH	Sum of PAHs (SFEI)	1	X	66.84	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SUICRKUP	19-Apr-05	3ORG	1APAH	Sum of PAHs (SFEI)	1	X	42.52	ug/kg	1.08	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	COYCRKLWR	18-Apr-05	3ORG	1LAPAH	Sum of LPAHs (SFEI)	1	X	107.25	ug/kg	1.02	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	1LAPAH	Sum of LPAHs (SFEI)	1	X	147.17	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	COYCRKUP	18-Apr-05	3ORG	1LAPAH	Sum of LPAHs (SFEI)	2	X	60.88	ug/kg	0.78	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	1LAPAH	Sum of LPAHs (SFEI)	1	X	210.45	ug/kg	1.39	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	1LAPAH	Sum of LPAHs (SFEI)	1	X	108.95	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	NAPRIVUP	19-Apr-05	3ORG	1LAPAH	Sum of LPAHs (SFEI)	1	X	123.22	ug/kg	0.86	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	1LAPAH	Sum of LPAHs (SFEI)	1	X	161.70	ug/kg	2.17	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	1LAPAH	Sum of LPAHs (SFEI)	2	X	78.53	ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	PETRIVUP	20-Apr-05	3ORG	1LAPAH	Sum of LPAHs (SFEI)	1	X	134.47	ug/kg	1.09	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	1LAPAH	Sum of LPAHs (SFEI)	1	X	86.69	ug/kg	0.82	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	1LAPAH	Sum of LPAHs (SFEI)	1	X	120.86	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	1LAPAH	Sum of LPAHs (SFEI)	1	X	311.98	ug/kg	1.02	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	1LAPAH	Sum of LPAHs (SFEI)	1	X	236.47	ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	1LAPAH	Sum of LPAHs (SFEI)	1	X	226.66	ug/kg	1.84	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	1LAPAH	Sum of LPAHs (SFEI)	1	X	393.90	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	1LAPAH	Sum of LPAHs (SFEI)	1	X	248.05	ug/kg	1.07	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SUICRKLWR	19-Apr-05	3ORG	1LAPAH	Sum of LPAHs (SFEI)	1	X	45.91	ug/kg	1.13	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	1LAPAH	Sum of LPAHs (SFEI)	1	X	6.16	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SUICRKUP	19-Apr-05	3ORG	1LAPAH	Sum of LPAHs (SFEI)	1	X	12.92	ug/kg	0.82	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	COYCRKLWR	18-Apr-05	3ORG	1LPAH	1-Methylnaphthalene	1	SC,VNBC	5.35	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	1LPAH	1-Methylnaphthalene	1	ND VIL,GN,H,SC,VNBC	0.00	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	COYCRKUP	18-Apr-05	3ORG	1LPAH	1-Methylnaphthalene	2	SC,VNBC	3.91	ug/kg	0.66	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	1LPAH	1-Methylnaphthalene	1	SC,VNBC	23.10	ug/kg	1.18	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	1LPAH	1-Methylnaphthalene	1	VIL,H,SC,VNBC	14.40	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	NAPRIVUP	19-Apr-05	3ORG	1LPAH	1-Methylnaphthalene	1	SC,VNBC	15.40	ug/kg	0.73	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	1LPAH	1-Methylnaphthalene	1	SC,VNBC	7.52	ug/kg	1.84	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	1LPAH	1-Methylnaphthalene	2	VIL,H,IL,SC,VNBC	4.21	ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	PETRIVUP	20-Apr-05	3ORG	1LPAH	1-Methylnaphthalene	1	SC,VNBC	6.56	ug/kg	0.92	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	1LPAH	1-Methylnaphthalene	1	ND SC,VNBC	0.00	ug/kg	0.70	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	1LPAH	1-Methylnaphthalene	1	ND VIL,H,SC,VNBC	0.00	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	1LPAH	1-Methylnaphthalene	1	SC,VNBC	5.37	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	1LPAH	1-Methylnaphthalene	1	VIL,H,SC,VNBC	11.50	ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	1LPAH	1-Methylnaphthalene	1	SC,VNBC	8.88	ug/kg	1.56	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	1LPAH	1-Methylnaphthalene	1	VIL,H,SC,VNBC	11.80	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	1LPAH	1-Methylnaphthalene	1	SC,VNBC	11.10	ug/kg	0.91	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SUICRKLWR	19-Apr-05	3ORG	1LPAH	1-Methylnaphthalene	1	SC,VNBC	3.51	ug/kg	0.96	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	1LPAH	1-Methylnaphthalene	1	ND VIL,H,SC,VNBC	0.00	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SUICRKUP	19-Apr-05	3ORG	1LPAH	1-Methylnaphthalene	1	SC,VNBC	1.88	ug/kg	0.69	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	COYCRKLWR	18-Apr-05	3ORG	1LPAH	1-Methylphenanthrene	1	SC,VNBC	6.27	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	1LPAH	1-Methylphenanthrene	1	H,SC,VNBC	5.13	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	COYCRKUP	18-Apr-05	3ORG	1LPAH	1-Methylphenanthrene	2	SC,VNBC	3.90	ug/kg	0.66	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	1LPAH	1-Methylphenanthrene	1	SC,VNBC	13.30	ug/kg	1.18	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	1LPAH	1-Methylphenanthrene	1	H,SC,VNBC	8.97	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	NAPRIVUP	19-Apr-05	3ORG	1LPAH	1-Methylphenanthrene	1	SC,VNBC	10.10	ug/kg	0.73	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	1LPAH	1-Methylphenanthrene	1	SC,VNBC	8.99	ug/kg	1.84	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	1LPAH	1-Methylphenanthrene	2	H,SC,VNBC	5.80	ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	PETRIVUP	20-Apr-05	3ORG	1LPAH	1-Methylphenanthrene	1	SC,VNBC	8.45	ug/kg	0.92	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	1LPAH	1-Methylphenanthrene	1	SC,VNBC	5.79	ug/kg	0.70	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	1LPAH	1-Methylphenanthrene	1	H,SC,VNBC	6.74	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	1LPAH	1-Methylphenanthrene	1	SC,VNBC	17.50	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	1LPAH	1-Methylphenanthrene	1	H,SC,VNBC	14.00	ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	1LPAH	1-Methylphenanthrene	1	SC,VNBC	13.30	ug/kg	1.56	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	1LPAH	1-Methylphenanthrene	1	H,SC,VNBC	29.00	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	1LPAH	1-Methylphenanthrene	1	SC,VNBC	19.70	ug/kg	0.91	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SUICRKLWR	19-Apr-05	3ORG	1LPAH	1-Methylphenanthrene	1	SC,VNBC	2.68	ug/kg	0.96	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	1LPAH	1-Methylphenanthrene	1	ND H,SC,VNBC	0.00	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SUICRKUP	19-Apr-05	3ORG	1LPAH	1-Methylphenanthrene	1	ND SC,VNBC	0.00	ug/kg	0.69	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	COYCRKLWR	18-Apr-05	3ORG	1LPAH	2,3,5-Trimethylnaphthalene	1	VIU,SC,VNBC	1.99	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	1LPAH	2,3,5-Trimethylnaphthalene	1	VRIU,H,SC,VNBC		ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	COYCRKUP	18-Apr-05	3ORG	1LPAH	2,3,5-Trimethylnaphthalene	2	ND VIU,SC,VNBC	0.00	ug/kg	0.66	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	1LPAH	2,3,5-Trimethylnaphthalene	1	VIU,SC,VNBC	6.64	ug/kg	1.18	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	1LPAH	2,3,5-Trimethylnaphthalene	1	VRIU,H,SC,VNBC		ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	NAPRIVUP	19-Apr-05	3ORG	1LPAH	2,3,5-Trimethylnaphthalene	1	VIU,SC,VNBC	5.21	ug/kg	0.73	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	1LPAH	2,3,5-Trimethylnaphthalene	1	ND VIU,SC,VNBC	0.00	ug/kg	1.84	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	1LPAH	2,3,5-Trimethylnaphthalene	2	VRIU,H,IL,SC,VNBC		ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	PETRIVUP	20-Apr-05	3ORG	1LPAH	2,3,5-Trimethylnaphthalene	1	VIU,SC,VNBC	3.03	ug/kg	0.92	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	1LPAH	2,3,5-Trimethylnaphthalene	1	ND VIU,SC,VNBC	0.00	ug/kg	0.70	DFG-WPCL	WPCL_L-211-05_S_PAH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	SANLORCRKUP	03-Nov-04	3ORG	1LPAH	2,3,5-Trimethylnaphthalene	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	1LPAH	2,3,5-Trimethylnaphthalene	1	ND VIU,SC,VNBC	0.00	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	1LPAH	2,3,5-Trimethylnaphthalene	1	VRIU,H,SC,VNBC		ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	1LPAH	2,3,5-Trimethylnaphthalene	1	ND VIU,SC,VNBC	0.00	ug/kg	1.56	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	1LPAH	2,3,5-Trimethylnaphthalene	1	VRIU,H,SC,VNBC		ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	1LPAH	2,3,5-Trimethylnaphthalene	1	VIU,SC,VNBC	3.36	ug/kg	0.91	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SUICRKLWR	19-Apr-05	3ORG	1LPAH	2,3,5-Trimethylnaphthalene	1	ND VIU,SC,VNBC	0.00	ug/kg	0.96	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	1LPAH	2,3,5-Trimethylnaphthalene	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SUICRKUP	19-Apr-05	3ORG	1LPAH	2,3,5-Trimethylnaphthalene	1	ND VIU,SC,VNBC	0.00	ug/kg	0.69	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	COYCRKLWR	18-Apr-05	3ORG	1LPAH	2,6-Dimethylnaphthalene	1	SC,VNBC	8.64	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	1LPAH	2,6-Dimethylnaphthalene	1	GN,H,SC,VNBC	5.66	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	COYCRKUP	18-Apr-05	3ORG	1LPAH	2,6-Dimethylnaphthalene	2	SC,VNBC	4.33	ug/kg	0.66	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	1LPAH	2,6-Dimethylnaphthalene	1	SC,VNBC	20.90	ug/kg	1.18	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	1LPAH	2,6-Dimethylnaphthalene	1	H,SC,VNBC	14.20	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	NAPRIVUP	19-Apr-05	3ORG	1LPAH	2,6-Dimethylnaphthalene	1	SC,VNBC	13.30	ug/kg	0.73	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	1LPAH	2,6-Dimethylnaphthalene	1	SC,VNBC	12.90	ug/kg	1.84	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	1LPAH	2,6-Dimethylnaphthalene	2	H,SC,VNBC	3.99	ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	PETRIVUP	20-Apr-05	3ORG	1LPAH	2,6-Dimethylnaphthalene	1	SC,VNBC	9.29	ug/kg	0.92	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	1LPAH	2,6-Dimethylnaphthalene	1	SC,VNBC	2.55	ug/kg	0.70	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	1LPAH	2,6-Dimethylnaphthalene	1	H,SC,VNBC	5.30	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	1LPAH	2,6-Dimethylnaphthalene	1	SC,VNBC	5.05	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	1LPAH	2,6-Dimethylnaphthalene	1	H,SC,VNBC	11.40	ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	1LPAH	2,6-Dimethylnaphthalene	1	SC,VNBC	14.80	ug/kg	1.56	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	1LPAH	2,6-Dimethylnaphthalene	1	H,SC,VNBC	10.30	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	1LPAH	2,6-Dimethylnaphthalene	1	SC,VNBC	17.30	ug/kg	0.91	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SUICRKLWR	19-Apr-05	3ORG	1LPAH	2,6-Dimethylnaphthalene	1	SC,VNBC	4.64	ug/kg	0.96	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	1LPAH	2,6-Dimethylnaphthalene	1	ND H,SC,VNBC	0.00	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SUICRKUP	19-Apr-05	3ORG	1LPAH	2,6-Dimethylnaphthalene	1	SC,VNBC	1.60	ug/kg	0.69	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	COYCRKLWR	18-Apr-05	3ORG	1LPAH	2-Methylnaphthalene	1	SC,VNBC	11.50	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	1LPAH	2-Methylnaphthalene	1	GN,H,SC,VNBC	44.70	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	COYCRKUP	18-Apr-05	3ORG	1LPAH	2-Methylnaphthalene	2	SC,VNBC	8.66	ug/kg	0.66	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	1LPAH	2-Methylnaphthalene	1	SC,VNBC	42.30	ug/kg	1.18	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	1LPAH	2-Methylnaphthalene	1	H,SC,VNBC	20.30	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	NAPRIVUP	19-Apr-05	3ORG	1LPAH	2-Methylnaphthalene	1	SC,VNBC	24.70	ug/kg	0.73	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	1LPAH	2-Methylnaphthalene	1	SC,VNBC	14.80	ug/kg	1.84	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	1LPAH	2-Methylnaphthalene	2	H,IL,SC,VNBC	6.55	ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	PETRIVUP	20-Apr-05	3ORG	1LPAH	2-Methylnaphthalene	1	SC,VNBC	11.40	ug/kg	0.92	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	1LPAH	2-Methylnaphthalene	1	SC,VNBC	2.65	ug/kg	0.70	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	1LPAH	2-Methylnaphthalene	1	H,SC,VNBC	2.41	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	1LPAH	2-Methylnaphthalene	1	SC,VNBC	9.65	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	1LPAH	2-Methylnaphthalene	1	H,SC,VNBC	20.10	ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	1LPAH	2-Methylnaphthalene	1	SC,VNBC	16.10	ug/kg	1.56	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	1LPAH	2-Methylnaphthalene	1	H,SC,VNBC	18.90	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	1LPAH	2-Methylnaphthalene	1	SC,VNBC	18.90	ug/kg	0.91	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SUICRKLWR	19-Apr-05	3ORG	1LPAH	2-Methylnaphthalene	1	SC,VNBC	6.37	ug/kg	0.96	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	1LPAH	2-Methylnaphthalene	1	ND H,SC,VNBC	0.00	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SUICRKUP	19-Apr-05	3ORG	1LPAH	2-Methylnaphthalene	1	SC,VNBC	2.84	ug/kg	0.69	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	COYCRKLWR	18-Apr-05	3ORG	1LPAH	Acenaphthene	1	VIU,SC,VNBC	1.84	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	1LPAH	Acenaphthene	1	ND H,SC,VNBC	0.00	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	COYCRKUP	18-Apr-05	3ORG	1LPAH	Acenaphthene	2	ND VIU,SC,VNBC	0.00	ug/kg	0.66	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	1LPAH	Acenaphthene	1	VIU,SC,VNBC	3.19	ug/kg	1.18	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	1LPAH	Acenaphthene	1	ND H,SC,VNBC	0.00	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	NAPRIVUP	19-Apr-05	3ORG	1LPAH	Acenaphthene	1	ND VIU,SC,VNBC	0.00	ug/kg	0.73	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	1LPAH	Acenaphthene	1	ND VIU,SC,VNBC	0.00	ug/kg	1.84	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	1LPAH	Acenaphthene	2	ND H,SC,VNBC	0.00	ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	PETRIVUP	20-Apr-05	3ORG	1LPAH	Acenaphthene	1	VIU,SC,VNBC	3.24	ug/kg	0.92	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	1LPAH	Acenaphthene	1	VIU,SC,VNBC	2.18	ug/kg	0.70	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	1LPAH	Acenaphthene	1	H,SC,VNBC	4.49	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	1LPAH	Acenaphthene	1	VIU,SC,VNBC	9.13	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	1LPAH	Acenaphthene	1	H,SC,VNBC	4.22	ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	1LPAH	Acenaphthene	1	VIU,SC,VNBC	5.64	ug/kg	1.56	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	1LPAH	Acenaphthene	1	H,SC,VNBC	10.40	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	1LPAH	Acenaphthene	1	VIU,SC,VNBC	4.05	ug/kg	0.91	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SUICRKLWR	19-Apr-05	3ORG	1LPAH	Acenaphthene	1	ND VIU,SC,VNBC	0.00	ug/kg	0.96	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	1LPAH	Acenaphthene	1	ND H,SC,VNBC	0.00	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SUICRKUP	19-Apr-05	3ORG	1LPAH	Acenaphthene	1	ND VIU,SC,VNBC	0.00	ug/kg	0.69	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	COYCRKLWR	18-Apr-05	3ORG	1LPAH	Acenaphthylene	1	SC,VNBC	2.59	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	1LPAH	Acenaphthylene	1	ND H,SC,VNBC	0.00	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	COYCRKUP	18-Apr-05	3ORG	1LPAH	Acenaphthylene	2	ND SC,VNBC	0.00	ug/kg	0.66	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	1LPAH	Acenaphthylene	1	ND SC,VNBC	0.00	ug/kg	1.18	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	1LPAH	Acenaphthylene	1	ND H,SC,VNBC	0.00	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	NAPRIVUP	19-Apr-05	3ORG	1LPAH	Acenaphthylene	1	ND SC,VNBC	0.00	ug/kg	0.73	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	1LPAH	Acenaphthylene	1	SC,VNBC	5.79	ug/kg	1.84	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	1LPAH	Acenaphthylene	2	H,SC,VNBC	2.65	ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	PETRIVUP	20-Apr-05	3ORG	1LPAH	Acenaphthylene	1	SC,VNBC	3.38	ug/kg	0.92	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	1LPAH	Acenaphthylene	1	ND SC,VNBC	0.00	ug/kg	0.70	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	1LPAH	Acenaphthylene	1	ND H,SC,VNBC	0.00	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	1LPAH	Acenaphthylene	1	SC,VNBC	3.17	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	1LPAH	Acenaphthylene	1	H,SC,VNBC	7.91	ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	1LPAH	Acenaphthylene	1	SC,VNBC	7.49	ug/kg	1.56	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	1LPAH	Acenaphthylene	1	H,SC,VNBC	3.25	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	1LPAH	Acenaphthylene	1	SC,VNBC	2.17	ug/kg	0.91	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SUICRKLWR	19-Apr-05	3ORG	1LPAH	Acenaphthylene	1	ND SC,VNBC	0.00	ug/kg	0.96	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	1LPAH	Acenaphthylene	1	ND H,SC,VNBC	0.00	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SUICRKUP	19-Apr-05	3ORG	1LPAH	Acenaphthylene	1	ND SC,VNBC	0.00	ug/kg	0.69	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	COYCRKLWR	18-Apr-05	3ORG	1LPAH	Anthracene	1	SC,VNBC	7.23	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	1LPAH	Anthracene	1	H,SC,VNBC	4.11	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	COYCRKUP	18-Apr-05	3ORG	1LPAH	Anthracene	2	SC,VNBC	2.14	ug/kg	0.66	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	1LPAH	Anthracene	1	SC,VNBC	3.93	ug/kg	1.18	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	1LPAH	Anthracene	1	H,SC,VNBC	1.47	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	NAPRIVUP	19-Apr-05	3ORG	1LPAH	Anthracene	1	SC,VNBC	1.51	ug/kg	0.73	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	1LPAH	Anthracene	1	SC,VNBC	16.90	ug/kg	1.84	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	1LPAH	Anthracene	2	H,SC,VNBC	6.40	ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	PETRIVUP	20-Apr-05	3ORG	1LPAH	Anthracene	1	SC,VNBC	8.45	ug/kg	0.92	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	1LPAH	Anthracene	1	SC,VNBC	9.96	ug/kg	0.70	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	1LPAH	Anthracene	1	H,SC,VNBC	12.10	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	1LPAH	Anthracene	1	SC,VNBC	38.40	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	1LPAH	Anthracene	1	H,SC,VNBC	18.50	ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	1LPAH	Anthracene	1	SC,VNBC	22.00	ug/kg	1.56	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	1LPAH	Anthracene	1	H,SC,VNBC	35.40	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	1LPAH	Anthracene	1	SC,VNBC	15.50	ug/kg	0.91	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SUICRKLWR	19-Apr-05	3ORG	1LPAH	Anthracene	1	SC,VNBC	2.79	ug/kg	0.96	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	1LPAH	Anthracene	1	ND H,SC,VNBC	0.00	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SUICRKUP	19-Apr-05	3ORG	1LPAH	Anthracene	1	ND SC,VNBC	0.00	ug/kg	0.69	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	COYCRKLWR	18-Apr-05	3ORG	1LPAH	Biphenyl	1	VIU,SC,VNBC	5.09	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	1LPAH	Biphenyl	1	GN,H,SC,VNBC	3.67	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	COYCRKUP	18-Apr-05	3ORG	1LPAH	Biphenyl	2	VIU,SC,VNBC	3.79	ug/kg	0.66	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	1LPAH	Biphenyl	1	VIU,SC,VNBC	11.90	ug/kg	1.18	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	1LPAH	Biphenyl	1	H,SC,VNBC	7.38	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	NAPRIVUP	19-Apr-05	3ORG	1LPAH	Biphenyl	1	VIU,SC,VNBC	7.40	ug/kg	0.73	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	1LPAH	Biphenyl	1	VIU,SC,VNBC	7.84	ug/kg	1.84	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	1LPAH	Biphenyl	2	ND H,SC,VNBC	0.98	ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	PETRIVUP	20-Apr-05	3ORG	1LPAH	Biphenyl	1	VIU,SC,VNBC	4.12	ug/kg	0.92	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	1LPAH	Biphenyl	1	ND VIU,SC,VNBC	0.00	ug/kg	0.70	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	1LPAH	Biphenyl	1	ND H,SC,VNBC	0.00	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	1LPAH	Biphenyl	1	VIU,SC,VNBC	2.09	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	1LPAH	Biphenyl	1	H,SC,VNBC	9.91	ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	1LPAH	Biphenyl	1	VIU,SC,VNBC	9.40	ug/kg	1.56	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	1LPAH	Biphenyl	1	H,SC,VNBC	7.95	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	1LPAH	Biphenyl	1	VIU,SC,VNBC	8.13	ug/kg	0.91	DFG-WPCL	WPCL_L-211-05_S_PAH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SUICRKLWR	19-Apr-05	3ORG	1LPAH	Biphenyl	1	VIU,SC,VNBC	2.32	ug/kg	0.96	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	1LPAH	Biphenyl	1	ND H,SC,VNBC	0.00	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SUICRKUP	19-Apr-05	3ORG	1LPAH	Biphenyl	1	ND VIU,SC,VNBC	0.00	ug/kg	0.69	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	COYCRKLWR	18-Apr-05	3ORG	1LPAH	Dibenzothiophene	1	SC,VNBC	3.64	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	1LPAH	Dibenzothiophene	1	H,SC,VNBC	3.43	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	COYCRKUP	18-Apr-05	3ORG	1LPAH	Dibenzothiophene	2	SC,VNBC	2.60	ug/kg	0.66	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	1LPAH	Dibenzothiophene	1	SC,VNBC	3.36	ug/kg	1.18	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	1LPAH	Dibenzothiophene	1	H,SC,VNBC	1.55	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	NAPRIVUP	19-Apr-05	3ORG	1LPAH	Dibenzothiophene	1	ND SC,VNBC	0.00	ug/kg	0.73	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	1LPAH	Dibenzothiophene	1	SC,VNBC	5.36	ug/kg	1.84	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	1LPAH	Dibenzothiophene	2	H,SC,VNBC	3.11	ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	PETRIVUP	20-Apr-05	3ORG	1LPAH	Dibenzothiophene	1	SC,VNBC	3.30	ug/kg	0.92	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	1LPAH	Dibenzothiophene	1	SC,VNBC	2.67	ug/kg	0.70	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	1LPAH	Dibenzothiophene	1	H,SC,VNBC	4.37	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	1LPAH	Dibenzothiophene	1	SC,VNBC	9.02	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	1LPAH	Dibenzothiophene	1	H,SC,VNBC	6.13	ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	1LPAH	Dibenzothiophene	1	SC,VNBC	6.35	ug/kg	1.56	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	1LPAH	Dibenzothiophene	1	H,SC,VNBC	10.40	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	1LPAH	Dibenzothiophene	1	SC,VNBC	6.71	ug/kg	0.91	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SUICRKLWR	19-Apr-05	3ORG	1LPAH	Dibenzothiophene	1	ND SC,VNBC	0.00	ug/kg	0.96	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	1LPAH	Dibenzothiophene	1	ND H,SC,VNBC	0.00	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SUICRKUP	19-Apr-05	3ORG	1LPAH	Dibenzothiophene	1	ND SC,VNBC	0.00	ug/kg	0.69	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	COYCRKLWR	18-Apr-05	3ORG	1LPAH	Fluorene	1	VIU,SC,VNBC	4.71	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	1LPAH	Fluorene	1	H,SC,VNBC	4.37	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	COYCRKUP	18-Apr-05	3ORG	1LPAH	Fluorene	2	VIU,SC,VNBC	2.31	ug/kg	0.66	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	1LPAH	Fluorene	1	VIU,SC,VNBC	9.63	ug/kg	1.18	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	1LPAH	Fluorene	1	H,SC,VNBC	4.08	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	NAPRIVUP	19-Apr-05	3ORG	1LPAH	Fluorene	1	VIU,SC,VNBC	3.90	ug/kg	0.73	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	1LPAH	Fluorene	1	VIU,SC,VNBC	10.40	ug/kg	1.84	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	1LPAH	Fluorene	2	H,SC,VNBC	4.80	ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	PETRIVUP	20-Apr-05	3ORG	1LPAH	Fluorene	1	VIU,SC,VNBC	7.45	ug/kg	0.92	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	1LPAH	Fluorene	1	VIU,SC,VNBC	2.76	ug/kg	0.70	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	1LPAH	Fluorene	1	H,SC,VNBC	6.14	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	1LPAH	Fluorene	1	VIU,SC,VNBC	10.90	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	1LPAH	Fluorene	1	H,SC,VNBC	10.90	ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	1LPAH	Fluorene	1	VIU,SC,VNBC	11.10	ug/kg	1.56	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	1LPAH	Fluorene	1	H,SC,VNBC	15.70	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	1LPAH	Fluorene	1	VIU,SC,VNBC	5.73	ug/kg	0.91	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SUICRKLWR	19-Apr-05	3ORG	1LPAH	Fluorene	1	VIU,SC,VNBC	3.43	ug/kg	0.96	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	1LPAH	Fluorene	1	ND H,SC,VNBC	0.00	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SUICRKUP	19-Apr-05	3ORG	1LPAH	Fluorene	1	ND VIU,SC,VNBC	0.00	ug/kg	0.69	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	COYCRKLWR	18-Apr-05	3ORG	1LPAH	Naphthalene	1	SC,VNBC	13.50	ug/kg	1.34	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	1LPAH	Naphthalene	1	GN,H,SC,VNBC	48.70	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	COYCRKUP	18-Apr-05	3ORG	1LPAH	Naphthalene	2	SC,VNBC	6.91	ug/kg	1.03	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	1LPAH	Naphthalene	1	SC,VNBC	25.60	ug/kg	1.83	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	1LPAH	Naphthalene	1	H,SC,VNBC	10.40	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	NAPRIVUP	19-Apr-05	3ORG	1LPAH	Naphthalene	1	SC,VNBC	14.60	ug/kg	1.13	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	1LPAH	Naphthalene	1	SC,VNBC	21.20	ug/kg	2.85	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	1LPAH	Naphthalene	2	H,SC,VNBC	6.56	ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	PETRIVUP	20-Apr-05	3ORG	1LPAH	Naphthalene	1	SC,VNBC	16.50	ug/kg	1.43	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	1LPAH	Naphthalene	1	SC,VNBC	3.33	ug/kg	1.08	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	1LPAH	Naphthalene	1	H,SC,VNBC	3.51	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	1LPAH	Naphthalene	1	SC,VNBC	12.70	ug/kg	1.35	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	1LPAH	Naphthalene	1	H,SC,VNBC	38.30	ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	1LPAH	Naphthalene	1	SC,VNBC	26.60	ug/kg	2.42	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	1LPAH	Naphthalene	1	H,SC,VNBC	16.80	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	1LPAH	Naphthalene	1	SC,VNBC	17.40	ug/kg	1.41	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SUICRKLWR	19-Apr-05	3ORG	1LPAH	Naphthalene	1	SC,VNBC	6.27	ug/kg	1.48	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	1LPAH	Naphthalene	1	H,SC,VNBC	1.50	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SUICRKUP	19-Apr-05	3ORG	1LPAH	Naphthalene	1	SC,VNBC	1.75	ug/kg	1.07	DFG-WPCL	WPCL_L-211-05_S_PAH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	COYCRKLWR	18-Apr-05	3ORG	1LPAH	Phenanthrene	1	SC,VNBC	34.90	ug/kg	2.40	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	1LPAH	Phenanthrene	1	H,SC,VNBC	27.40	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	COYCRKUP	18-Apr-05	3ORG	1LPAH	Phenanthrene	2	SC,VNBC	22.35	ug/kg	1.84	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	1LPAH	Phenanthrene	1	SC,VNBC	46.60	ug/kg	3.27	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	1LPAH	Phenanthrene	1	H,SC,VNBC	26.20	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	NAPRIVUP	19-Apr-05	3ORG	1LPAH	Phenanthrene	1	SC,VNBC	27.10	ug/kg	2.02	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	1LPAH	Phenanthrene	1	SC,VNBC	50.00	ug/kg	5.10	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	1LPAH	Phenanthrene	2	H,SC,VNBC	33.50	ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	PETRIVUP	20-Apr-05	3ORG	1LPAH	Phenanthrene	1	SC,VNBC	49.30	ug/kg	2.56	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	1LPAH	Phenanthrene	1	SC,VNBC	54.80	ug/kg	1.93	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	1LPAH	Phenanthrene	1	H,SC,VNBC	75.80	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	1LPAH	Phenanthrene	1	SC,VNBC	189.00	ug/kg	2.40	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	1LPAH	Phenanthrene	1	H,SC,VNBC	83.60	ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	1LPAH	Phenanthrene	1	SC,VNBC	85.00	ug/kg	4.32	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	1LPAH	Phenanthrene	1	H,SC,VNBC	224.00	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	1LPAH	Phenanthrene	1	SC,VNBC	118.00	ug/kg	2.53	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SUICRKLWR	19-Apr-05	3ORG	1LPAH	Phenanthrene	1	SC,VNBC	13.90	ug/kg	2.65	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	1LPAH	Phenanthrene	1	H,SC,VNBC	4.66	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SUICRKUP	19-Apr-05	3ORG	1LPAH	Phenanthrene	1	SC,VNBC	4.85	ug/kg	1.92	DFG-WPCL	WPCL_L-211-05_S_PAH

High molecular weight PAHs

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	COYCRKLWR	18-Apr-05	3ORG	2HAPAH	Sum of HPAHs (SFEI)	1	X	579.10	ug/kg	1.68	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	2HAPAH	Sum of HPAHs (SFEI)	1	X	394.00	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	COYCRKUP	18-Apr-05	3ORG	2HAPAH	Sum of HPAHs (SFEI)	2	X	205.87	ug/kg	1.28	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	2HAPAH	Sum of HPAHs (SFEI)	1	X	231.24	ug/kg	2.28	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	2HAPAH	Sum of HPAHs (SFEI)	1	X	131.21	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	NAPRIVUP	19-Apr-05	3ORG	2HAPAH	Sum of HPAHs (SFEI)	1	X	109.73	ug/kg	1.41	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	2HAPAH	Sum of HPAHs (SFEI)	1	X	985.80	ug/kg	3.55	DFG-WPCL	WPCL_L-211-05_S_PAH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	PETRIVUP	02-Nov-04	3ORG	2HAPAH	Sum of HPAHs (SFEI)	2	X	522.34	ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	PETRIVUP	20-Apr-05	3ORG	2HAPAH	Sum of HPAHs (SFEI)	1	X	399.70	ug/kg	1.79	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	2HAPAH	Sum of HPAHs (SFEI)	1	X	716.90	ug/kg	1.34	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	2HAPAH	Sum of HPAHs (SFEI)	1	X	983.00	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	2HAPAH	Sum of HPAHs (SFEI)	1	X	2703.00	ug/kg	1.68	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	2HAPAH	Sum of HPAHs (SFEI)	1	X	1407.00	ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	2HAPAH	Sum of HPAHs (SFEI)	1	X	1323.10	ug/kg	3.01	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	2HAPAH	Sum of HPAHs (SFEI)	1	X	2641.10	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	2HAPAH	Sum of HPAHs (SFEI)	1	X	1355.50	ug/kg	1.76	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SUICRKLWR	19-Apr-05	3ORG	2HAPAH	Sum of HPAHs (SFEI)	1	X	191.25	ug/kg	1.85	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	2HAPAH	Sum of HPAHs (SFEI)	1	X	60.68	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SUICRKUP	19-Apr-05	3ORG	2HAPAH	Sum of HPAHs (SFEI)	1	X	29.60	ug/kg	1.34	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	COYCRKLWR	18-Apr-05	3ORG	2HPAH	Benz(a)anthracene	1	SC,VNBC	23.20	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	2HPAH	Benz(a)anthracene	1	H,SC,VNBC	19.10	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	COYCRKUP	18-Apr-05	3ORG	2HPAH	Benz(a)anthracene	2	SC,VNBC	9.56	ug/kg	0.66	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	2HPAH	Benz(a)anthracene	1	SC,VNBC	12.10	ug/kg	1.18	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	2HPAH	Benz(a)anthracene	1	H,SC,VNBC	7.73	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	NAPRIVUP	19-Apr-05	3ORG	2HPAH	Benz(a)anthracene	1	SC,VNBC	7.34	ug/kg	0.73	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	2HPAH	Benz(a)anthracene	1	SC,VNBC	44.10	ug/kg	1.84	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	2HPAH	Benz(a)anthracene	2	H,SC,VNBC	25.40	ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	PETRIVUP	20-Apr-05	3ORG	2HPAH	Benz(a)anthracene	1	SC,VNBC	21.50	ug/kg	0.92	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	2HPAH	Benz(a)anthracene	1	SC,VNBC	46.60	ug/kg	0.70	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	2HPAH	Benz(a)anthracene	1	H,SC,VNBC	72.40	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	2HPAH	Benz(a)anthracene	1	SC,VNBC	161.00	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	2HPAH	Benz(a)anthracene	1	H,SC,VNBC	67.70	ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	2HPAH	Benz(a)anthracene	1	SC,VNBC	59.10	ug/kg	1.56	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	2HPAH	Benz(a)anthracene	1	H,SC,VNBC	171.00	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	2HPAH	Benz(a)anthracene	1	SC,VNBC	77.80	ug/kg	0.91	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SUICRKLWR	19-Apr-05	3ORG	2HPAH	Benz(a)anthracene	1	SC,VNBC	8.28	ug/kg	0.96	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	2HPAH	Benz(a)anthracene	1	H,SC,VNBC	5.14	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SUICRKUP	19-Apr-05	3ORG	2HPAH	Benz(a)anthracene	1	SC,VNBC	1.97	ug/kg	0.69	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	COYCRKLWR	18-Apr-05	3ORG	2HPAH	Benzo(a)pyrene	1	SC,VNBC	49.70	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	2HPAH	Benzo(a)pyrene	1	H,SC,VNBC	31.30	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	COYCRKUP	18-Apr-05	3ORG	2HPAH	Benzo(a)pyrene	2	SC,VNBC	15.95	ug/kg	0.66	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	2HPAH	Benzo(a)pyrene	1	SC,VNBC	15.60	ug/kg	1.18	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	2HPAH	Benzo(a)pyrene	1	H,SC,VNBC	8.92	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	NAPRIVUP	19-Apr-05	3ORG	2HPAH	Benzo(a)pyrene	1	SC,VNBC	8.60	ug/kg	0.73	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	2HPAH	Benzo(a)pyrene	1	SC,VNBC	90.80	ug/kg	1.84	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	2HPAH	Benzo(a)pyrene	2	H,SC,VNBC	30.60	ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	PETRIVUP	20-Apr-05	3ORG	2HPAH	Benzo(a)pyrene	1	SC,VNBC	29.40	ug/kg	0.92	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	2HPAH	Benzo(a)pyrene	1	SC,VNBC	59.30	ug/kg	0.70	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	2HPAH	Benzo(a)pyrene	1	H,SC,VNBC	70.40	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	2HPAH	Benzo(a)pyrene	1	SC,VNBC	207.00	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	2HPAH	Benzo(a)pyrene	1	H,SC,VNBC	132.00	ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	2HPAH	Benzo(a)pyrene	1	SC,VNBC	135.00	ug/kg	1.56	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	2HPAH	Benzo(a)pyrene	1	H,SC,VNBC	153.00	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	2HPAH	Benzo(a)pyrene	1	SC,VNBC	103.00	ug/kg	0.91	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SUICRKLWR	19-Apr-05	3ORG	2HPAH	Benzo(a)pyrene	1	SC,VNBC	13.40	ug/kg	0.96	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	2HPAH	Benzo(a)pyrene	1	H,SC,VNBC	4.67	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SUICRKUP	19-Apr-05	3ORG	2HPAH	Benzo(a)pyrene	1	SC,VNBC	1.89	ug/kg	0.69	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	COYCRKLWR	18-Apr-05	3ORG	2HPAH	Benzo(b)fluoranthene	1	SC,VNBC	78.40	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	2HPAH	Benzo(b)fluoranthene	1	H,SC,VNBC	52.00	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	COYCRKUP	18-Apr-05	3ORG	2HPAH	Benzo(b)fluoranthene	2	SC,VNBC	33.30	ug/kg	0.66	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	2HPAH	Benzo(b)fluoranthene	1	SC,VNBC	27.90	ug/kg	1.18	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	2HPAH	Benzo(b)fluoranthene	1	H,SC,VNBC	15.90	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	NAPRIVUP	19-Apr-05	3ORG	2HPAH	Benzo(b)fluoranthene	1	SC,VNBC	16.40	ug/kg	0.73	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	2HPAH	Benzo(b)fluoranthene	1	SC,VNBC	109.00	ug/kg	1.84	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	2HPAH	Benzo(b)fluoranthene	2	H,SC,VNBC	59.25	ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	PETRIVUP	20-Apr-05	3ORG	2HPAH	Benzo(b)fluoranthene	1	SC,VNBC	48.60	ug/kg	0.92	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	2HPAH	Benzo(b)fluoranthene	1	SC,VNBC	84.30	ug/kg	0.70	DFG-WPCL	WPCL_L-211-05_S_PAH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	SANLORCRKUP	03-Nov-04	3ORG	2HPAH	Benzo(b)fluoranthene	1	H,SC,VNBC	99.60	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	2HPAH	Benzo(b)fluoranthene	1	SC,VNBC	293.00	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	2HPAH	Benzo(b)fluoranthene	1	H,SC,VNBC	163.00	ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	2HPAH	Benzo(b)fluoranthene	1	SC,VNBC	159.00	ug/kg	1.56	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	2HPAH	Benzo(b)fluoranthene	1	H,SC,VNBC	205.00	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	2HPAH	Benzo(b)fluoranthene	1	SC,VNBC	156.00	ug/kg	0.91	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SUICRKLWR	19-Apr-05	3ORG	2HPAH	Benzo(b)fluoranthene	1	SC,VNBC	19.50	ug/kg	0.96	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	2HPAH	Benzo(b)fluoranthene	1	H,SC,VNBC	6.59	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SUICRKUP	19-Apr-05	3ORG	2HPAH	Benzo(b)fluoranthene	1	SC,VNBC	4.15	ug/kg	0.69	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	COYCRKLWR	18-Apr-05	3ORG	2HPAH	Benzo(e)pyrene	1	SC,VNBC	50.10	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	2HPAH	Benzo(e)pyrene	1	H,SC,VNBC	31.30	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	COYCRKUP	18-Apr-05	3ORG	2HPAH	Benzo(e)pyrene	2	SC,VNBC	22.00	ug/kg	0.66	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	2HPAH	Benzo(e)pyrene	1	SC,VNBC	18.40	ug/kg	1.18	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	2HPAH	Benzo(e)pyrene	1	H,SC,VNBC	11.90	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	NAPRIVUP	19-Apr-05	3ORG	2HPAH	Benzo(e)pyrene	1	SC,VNBC	10.10	ug/kg	0.73	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	2HPAH	Benzo(e)pyrene	1	SC,VNBC	70.90	ug/kg	1.84	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	2HPAH	Benzo(e)pyrene	2	H,SC,VNBC	33.40	ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	PETRIVUP	20-Apr-05	3ORG	2HPAH	Benzo(e)pyrene	1	SC,VNBC	30.90	ug/kg	0.92	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	2HPAH	Benzo(e)pyrene	1	SC,VNBC	47.80	ug/kg	0.70	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	2HPAH	Benzo(e)pyrene	1	H,SC,VNBC	57.80	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	2HPAH	Benzo(e)pyrene	1	SC,VNBC	186.00	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	2HPAH	Benzo(e)pyrene	1	H,SC,VNBC	98.40	ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	2HPAH	Benzo(e)pyrene	1	SC,VNBC	98.40	ug/kg	1.56	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	2HPAH	Benzo(e)pyrene	1	H,SC,VNBC	122.00	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	2HPAH	Benzo(e)pyrene	1	SC,VNBC	98.20	ug/kg	0.91	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SUICRKLWR	19-Apr-05	3ORG	2HPAH	Benzo(e)pyrene	1	SC,VNBC	13.20	ug/kg	0.96	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	2HPAH	Benzo(e)pyrene	1	H,SC,VNBC	3.86	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SUICRKUP	19-Apr-05	3ORG	2HPAH	Benzo(e)pyrene	1	SC,VNBC	3.65	ug/kg	0.69	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	COYCRKLWR	18-Apr-05	3ORG	2HPAH	Benzo(ghi)perylene	1	VIP,SC,VNBC	68.80	ug/kg	10.60	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	2HPAH	Benzo(ghi)perylene	1	H,SC,VNBC	51.00	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	COYCRKUP	18-Apr-05	3ORG	2HPAH	Benzo(ghi)perylene	2	VRIP,SC,VNBC		ug/kg	8.11	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	2HPAH	Benzo(ghi)perylene	1	VRIP,SC,VNBC		ug/kg	14.40	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	2HPAH	Benzo(ghi)perylene	1	H,SC,VNBC	11.80	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	NAPRIVUP	19-Apr-05	3ORG	2HPAH	Benzo(ghi)perylene	1	VRIP,SC,VNBC		ug/kg	8.89	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	2HPAH	Benzo(ghi)perylene	1	VIP,SC,VNBC	93.30	ug/kg	22.40	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	2HPAH	Benzo(ghi)perylene	2	H,SC,VNBC	36.55	ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	PETRIVUP	20-Apr-05	3ORG	2HPAH	Benzo(ghi)perylene	1	VRIP,SC,VNBC		ug/kg	11.30	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	2HPAH	Benzo(ghi)perylene	1	VIP,SC,VNBC	53.30	ug/kg	8.48	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	2HPAH	Benzo(ghi)perylene	1	H,SC,VNBC	74.80	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	2HPAH	Benzo(ghi)perylene	1	VIP,SC,VNBC	230.00	ug/kg	10.60	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	2HPAH	Benzo(ghi)perylene	1	H,SC,VNBC	169.00	ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	2HPAH	Benzo(ghi)perylene	1	VIP,SC,VNBC	137.00	ug/kg	19.00	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	2HPAH	Benzo(ghi)perylene	1	H,SC,VNBC	175.00	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	2HPAH	Benzo(ghi)perylene	1	VIP,SC,VNBC	116.00	ug/kg	11.10	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SUICRKLWR	19-Apr-05	3ORG	2HPAH	Benzo(ghi)perylene	1	VRIP,SC,VNBC		ug/kg	11.70	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	2HPAH	Benzo(ghi)perylene	1	H,SC,VNBC	4.96	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SUICRKUP	19-Apr-05	3ORG	2HPAH	Benzo(ghi)perylene	1	ND SC,VNBC	0.00	ug/kg	8.45	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	COYCRKLWR	18-Apr-05	3ORG	2HPAH	Benzo(k)fluoranthene	1	SC,VNBC	25.00	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	2HPAH	Benzo(k)fluoranthene	1	H,SC,VNBC	16.00	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	COYCRKUP	18-Apr-05	3ORG	2HPAH	Benzo(k)fluoranthene	2	SC,VNBC	10.08	ug/kg	0.66	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	2HPAH	Benzo(k)fluoranthene	1	SC,VNBC	8.05	ug/kg	1.18	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	2HPAH	Benzo(k)fluoranthene	1	H,SC,VNBC	4.94	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	NAPRIVUP	19-Apr-05	3ORG	2HPAH	Benzo(k)fluoranthene	1	SC,VNBC	4.25	ug/kg	0.73	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	2HPAH	Benzo(k)fluoranthene	1	SC,VNBC	34.20	ug/kg	1.84	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	2HPAH	Benzo(k)fluoranthene	2	H,SC,VNBC	21.75	ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	PETRIVUP	20-Apr-05	3ORG	2HPAH	Benzo(k)fluoranthene	1	SC,VNBC	17.60	ug/kg	0.92	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	2HPAH	Benzo(k)fluoranthene	1	SC,VNBC	32.50	ug/kg	0.70	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	2HPAH	Benzo(k)fluoranthene	1	H,SC,VNBC	38.50	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	2HPAH	Benzo(k)fluoranthene	1	SC,VNBC	116.00	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	2HPAH	Benzo(k)fluoranthene	1	H,SC,VNBC	56.00	ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	2HPAH	Benzo(k)fluoranthene	1	SC,VNBC	52.80	ug/kg	1.56	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	2HPAH	Benzo(k)fluoranthene	1	H,SC,VNBC	86.60	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	2HPAH	Benzo(k)fluoranthene	1	SC,VNBC	57.70	ug/kg	0.91	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SUICRKLWR	19-Apr-05	3ORG	2HPAH	Benzo(k)fluoranthene	1	SC,VNBC	5.70	ug/kg	0.96	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	2HPAH	Benzo(k)fluoranthene	1	H,SC,VNBC	2.31	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SUICRKUP	19-Apr-05	3ORG	2HPAH	Benzo(k)fluoranthene	1	ND SC,VNBC	0.00	ug/kg	0.69	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	COYCRKLWR	18-Apr-05	3ORG	2HPAH	Chrysene	1	SC,VNBC	30.00	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	2HPAH	Chrysene	1	H,SC,VNBC	24.20	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	COYCRKUP	18-Apr-05	3ORG	2HPAH	Chrysene	2	SC,VNBC	16.40	ug/kg	0.66	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	2HPAH	Chrysene	1	SC,VNBC	15.00	ug/kg	1.18	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	2HPAH	Chrysene	1	H,SC,VNBC	10.50	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	NAPRIVUP	19-Apr-05	3ORG	2HPAH	Chrysene	1	SC,VNBC	9.93	ug/kg	0.73	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	2HPAH	Chrysene	1	SC,VNBC	38.10	ug/kg	1.84	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	2HPAH	Chrysene	2	H,IL,SC,VNBC	48.00	ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	PETRIVUP	20-Apr-05	3ORG	2HPAH	Chrysene	1	SC,VNBC	33.00	ug/kg	0.92	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	2HPAH	Chrysene	1	SC,VNBC	56.30	ug/kg	0.70	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	2HPAH	Chrysene	1	H,SC,VNBC	81.20	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	2HPAH	Chrysene	1	SC,VNBC	225.00	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	2HPAH	Chrysene	1	H,SC,VNBC	81.10	ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	2HPAH	Chrysene	1	SC,VNBC	67.70	ug/kg	1.56	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	2HPAH	Chrysene	1	H,SC,VNBC	249.00	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	2HPAH	Chrysene	1	SC,VNBC	107.00	ug/kg	0.91	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SUICRKLWR	19-Apr-05	3ORG	2HPAH	Chrysene	1	SC,VNBC	7.38	ug/kg	0.96	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	2HPAH	Chrysene	1	H,SC,VNBC	5.42	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SUICRKUP	19-Apr-05	3ORG	2HPAH	Chrysene	1	SC,VNBC	1.97	ug/kg	0.69	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	COYCRKLWR	18-Apr-05	3ORG	2HPAH	Dibenz(a,h)anthracene	1	VIU,HT,SC,SCR,VNBC	13.10	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	2HPAH	Dibenz(a,h)anthracene	1	H,SC,VNBC	13.40	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	COYCRKUP	18-Apr-05	3ORG	2HPAH	Dibenz(a,h)anthracene	2	VIU,HT,SC,SCR,VNBC	6.50	ug/kg	0.66	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	2HPAH	Dibenz(a,h)anthracene	1	VIU,HT,SC,SCR,VNBC	4.79	ug/kg	1.18	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	2HPAH	Dibenz(a,h)anthracene	1	H,SC,VNBC	3.97	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	NAPRIVUP	19-Apr-05	3ORG	2HPAH	Dibenz(a,h)anthracene	1	VIU,HT,SC,SCR,VNBC	3.17	ug/kg	0.73	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	2HPAH	Dibenz(a,h)anthracene	1	VIU,HT,SC,SCR,VNBC	17.40	ug/kg	1.84	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	2HPAH	Dibenz(a,h)anthracene	2	H,SC,VNBC	9.34	ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	PETRIVUP	20-Apr-05	3ORG	2HPAH	Dibenz(a,h)anthracene	1	VIU,HT,SC,SCR,VNBC	10.70	ug/kg	0.92	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	2HPAH	Dibenz(a,h)anthracene	1	VIU,HT,SC,SCR,VNBC	18.10	ug/kg	0.70	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	2HPAH	Dibenz(a,h)anthracene	1	H,SC,VNBC	23.10	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	2HPAH	Dibenz(a,h)anthracene	1	VIU,HT,SC,SCR,VNBC	78.30	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	2HPAH	Dibenz(a,h)anthracene	1	H,SC,VNBC	31.40	ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	2HPAH	Dibenz(a,h)anthracene	1	VIU,HT,SC,SCR,VNBC	25.60	ug/kg	1.56	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	2HPAH	Dibenz(a,h)anthracene	1	H,SC,VNBC	56.80	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	2HPAH	Dibenz(a,h)anthracene	1	VIU,HT,SC,SCR,VNBC	32.50	ug/kg	0.91	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SUICRKLWR	19-Apr-05	3ORG	2HPAH	Dibenz(a,h)anthracene	1	VIU,HT,SC,SCR,VNBC	3.09	ug/kg	0.96	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	2HPAH	Dibenz(a,h)anthracene	1	ND H,SC,VNBC	0.00	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SUICRKUP	19-Apr-05	3ORG	2HPAH	Dibenz(a,h)anthracene	1	ND VIU,HT,SC,SCR,VNBC	0.00	ug/kg	0.69	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	COYCRKLWR	18-Apr-05	3ORG	2HPAH	Fluoranthene	1	SC,VNBC	71.50	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	2HPAH	Fluoranthene	1	H,SC,VNBC	50.00	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	COYCRKUP	18-Apr-05	3ORG	2HPAH	Fluoranthene	2	IL,SC,VNBC	31.10	ug/kg	0.66	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	2HPAH	Fluoranthene	1	SC,VNBC	45.00	ug/kg	1.18	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	2HPAH	Fluoranthene	1	H,SC,VNBC	16.70	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	NAPRIVUP	19-Apr-05	3ORG	2HPAH	Fluoranthene	1	SC,VNBC	16.90	ug/kg	0.73	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	2HPAH	Fluoranthene	1	SC,VNBC	113.00	ug/kg	1.84	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	2HPAH	Fluoranthene	2	H,SC,VNBC	113.00	ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	PETRIVUP	20-Apr-05	3ORG	2HPAH	Fluoranthene	1	SC,VNBC	88.00	ug/kg	0.92	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	2HPAH	Fluoranthene	1	SC,VNBC	130.00	ug/kg	0.70	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	2HPAH	Fluoranthene	1	H,SC,VNBC	203.00	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	2HPAH	Fluoranthene	1	SC,VNBC	476.00	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	2HPAH	Fluoranthene	1	H,SC,VNBC	184.00	ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	2HPAH	Fluoranthene	1	SC,VNBC	189.00	ug/kg	1.56	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	2HPAH	Fluoranthene	1	H,SC,VNBC	657.00	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	2HPAH	Fluoranthene	1	SC,VNBC	251.00	ug/kg	0.91	DFG-WPCL	WPCL_L-211-05_S_PAH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SUICRKLWR	19-Apr-05	3ORG	2HPAH	Fluoranthene	1	SC,VNBC	26.00	ug/kg	0.96	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	2HPAH	Fluoranthene	1	H,SC,VNBC	10.50	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SUICRKUP	19-Apr-05	3ORG	2HPAH	Fluoranthene	1	SC,VNBC	3.60	ug/kg	0.69	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	COYCRKLWR	18-Apr-05	3ORG	2HPAH	Indeno(1,2,3-cd)pyrene	1	SC,VNBC	59.70	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	2HPAH	Indeno(1,2,3-cd)pyrene	1	H,SC,VNBC	44.00	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	COYCRKUP	18-Apr-05	3ORG	2HPAH	Indeno(1,2,3-cd)pyrene	2	SC,VNBC	21.10	ug/kg	0.66	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	2HPAH	Indeno(1,2,3-cd)pyrene	1	SC,VNBC	16.10	ug/kg	1.18	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	2HPAH	Indeno(1,2,3-cd)pyrene	1	H,SC,VNBC	9.55	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	NAPRIVUP	19-Apr-05	3ORG	2HPAH	Indeno(1,2,3-cd)pyrene	1	SC,VNBC	8.42	ug/kg	0.73	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	2HPAH	Indeno(1,2,3-cd)pyrene	1	SC,VNBC	101.00	ug/kg	1.84	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	2HPAH	Indeno(1,2,3-cd)pyrene	2	H,SC,VNBC	31.70	ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	PETRIVUP	20-Apr-05	3ORG	2HPAH	Indeno(1,2,3-cd)pyrene	1	SC,VNBC	32.40	ug/kg	0.92	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	2HPAH	Indeno(1,2,3-cd)pyrene	1	SC,VNBC	59.70	ug/kg	0.70	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	2HPAH	Indeno(1,2,3-cd)pyrene	1	H,SC,VNBC	73.40	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	2HPAH	Indeno(1,2,3-cd)pyrene	1	SC,VNBC	250.00	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	2HPAH	Indeno(1,2,3-cd)pyrene	1	H,SC,VNBC	151.00	ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	2HPAH	Indeno(1,2,3-cd)pyrene	1	SC,VNBC	133.00	ug/kg	1.56	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	2HPAH	Indeno(1,2,3-cd)pyrene	1	H,SC,VNBC	175.00	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	2HPAH	Indeno(1,2,3-cd)pyrene	1	SC,VNBC	104.00	ug/kg	0.91	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SUICRKLWR	19-Apr-05	3ORG	2HPAH	Indeno(1,2,3-cd)pyrene	1	SC,VNBC	15.60	ug/kg	0.96	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	2HPAH	Indeno(1,2,3-cd)pyrene	1	H,SC,VNBC	4.04	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SUICRKUP	19-Apr-05	3ORG	2HPAH	Indeno(1,2,3-cd)pyrene	1	SC,VNBC	2.74	ug/kg	0.69	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	COYCRKLWR	18-Apr-05	3ORG	2HPAH	Perylene	1	VIU,SC,VNBC	29.20	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	2HPAH	Perylene	1	H,SC,VNBC	13.90	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	COYCRKUP	18-Apr-05	3ORG	2HPAH	Perylene	2	VIU,SC,VNBC	8.58	ug/kg	0.66	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	2HPAH	Perylene	1	VIU,SC,VNBC	28.20	ug/kg	1.18	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	2HPAH	Perylene	1	H,SC,VNBC	12.90	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	NAPRIVUP	19-Apr-05	3ORG	2HPAH	Perylene	1	VIU,SC,VNBC	9.82	ug/kg	0.73	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	2HPAH	Perylene	1	VIU,SC,VNBC	137.00	ug/kg	1.84	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	2HPAH	Perylene	2	H,SC,VNBC	18.00	ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	PETRIVUP	20-Apr-05	3ORG	2HPAH	Perylene	1	VIU,SC,VNBC	16.40	ug/kg	0.92	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	2HPAH	Perylene	1	VIU,SC,VNBC	21.00	ug/kg	0.70	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	2HPAH	Perylene	1	H,SC,VNBC	25.80	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	2HPAH	Perylene	1	VIU,SC,VNBC	66.70	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	2HPAH	Perylene	1	H,SC,VNBC	59.40	ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	2HPAH	Perylene	1	VIU,SC,VNBC	55.50	ug/kg	1.56	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	2HPAH	Perylene	1	H,SC,VNBC	47.70	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	2HPAH	Perylene	1	VIU,SC,VNBC	32.30	ug/kg	0.91	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SUICRKLWR	19-Apr-05	3ORG	2HPAH	Perylene	1	VIU,SC,VNBC	53.10	ug/kg	0.96	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	2HPAH	Perylene	1	H,SC,VNBC	3.09	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SUICRKUP	19-Apr-05	3ORG	2HPAH	Perylene	1	VIU,SC,VNBC	6.11	ug/kg	0.69	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	COYCRKLWR	18-Apr-05	3ORG	2HPAH	Pyrene	1	SC,VNBC	80.40	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	COYCRKUP	01-Nov-04	3ORG	2HPAH	Pyrene	1	H,SC,VNBC	47.80	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	COYCRKUP	18-Apr-05	3ORG	2HPAH	Pyrene	2	SC,VNBC	31.30	ug/kg	0.66	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	2HPAH	Pyrene	1	SC,VNBC	40.10	ug/kg	1.18	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	NAPRIVUP	02-Nov-04	3ORG	2HPAH	Pyrene	1	H,SC,VNBC	16.40	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	NAPRIVUP	19-Apr-05	3ORG	2HPAH	Pyrene	1	SC,VNBC	14.80	ug/kg	0.73	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	PETRIVLWR	20-Apr-05	3ORG	2HPAH	Pyrene	1	SC,VNBC	137.00	ug/kg	1.84	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	PETRIVUP	02-Nov-04	3ORG	2HPAH	Pyrene	2	H,SC,VNBC	95.35	ug/kg	0.90	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	PETRIVUP	20-Apr-05	3ORG	2HPAH	Pyrene	1	SC,VNBC	71.20	ug/kg	0.92	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	2HPAH	Pyrene	1	SC,VNBC	108.00	ug/kg	0.70	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	2HPAH	Pyrene	1	H,SC,VNBC	163.00	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	2HPAH	Pyrene	1	SC,VNBC	414.00	ug/kg	0.87	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	2HPAH	Pyrene	1	H,SC,VNBC	214.00	ug/kg	1.14	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	2HPAH	Pyrene	1	SC,VNBC	211.00	ug/kg	1.56	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	2HPAH	Pyrene	1	H,SC,VNBC	543.00	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	2HPAH	Pyrene	1	SC,VNBC	220.00	ug/kg	0.91	DFG-WPCL	WPCL_L-211-05_S_PAH
2005-04	SUICRKLWR	19-Apr-05	3ORG	2HPAH	Pyrene	1	SC,VNBC	26.00	ug/kg	0.96	DFG-WPCL	WPCL_L-211-05_S_PAH
2004-11	SUICRKUP	03-Nov-04	3ORG	2HPAH	Pyrene	1	H,SC,VNBC	10.10	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS348_S_PAH
2005-04	SUICRKUP	19-Apr-05	3ORG	2HPAH	Pyrene	1	SC,VNBC	3.52	ug/kg	0.69	DFG-WPCL	WPCL_L-211-05_S_PAH

Appendix Table C.4. Sediment PCB results from the ambient tributary study in watersheds of the San Francisco Estuary (2004-2005). N = number of replicates. % solids were reported by each analytical laboratory. DFG-WPCL analyzed all trace organic samples in this study (see Appendix C - Table C.3). Lab codes are defined in table 1.1.

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	COYCRKLWR	18-Apr-05	3ORG	APCB	Sum of PCBs (SFEI)	1	X	23.07	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	APCB	Sum of PCBs (SFEI)	1	X	8.70	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	APCB	Sum of PCBs (SFEI)	2	X	11.38	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	APCB	Sum of PCBs (SFEI)	1	X	4.09	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	APCB	Sum of PCBs (SFEI)	1	X	2.79	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	APCB	Sum of PCBs (SFEI)	1	X	1.95	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	APCB	Sum of PCBs (SFEI)	1	X	4.23	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	APCB	Sum of PCBs (SFEI)	2	X	6.82	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	APCB	Sum of PCBs (SFEI)	1	X	1.51	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	APCB	Sum of PCBs (SFEI)	1	X	3.82	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	APCB	Sum of PCBs (SFEI)	1	X	7.80	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	APCB	Sum of PCBs (SFEI)	1	X	15.59	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	APCB	Sum of PCBs (SFEI)	1	X	10.90	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	APCB	Sum of PCBs (SFEI)	1	X	18.90	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	APCB	Sum of PCBs (SFEI)	1	X	35.09	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	APCB	Sum of PCBs (SFEI)	1	X	34.14	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	APCB	Sum of PCBs (SFEI)	1	X	1.75	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	APCB	Sum of PCBs (SFEI)	1	X	1.08	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	APCB	Sum of PCBs (SFEI)	1	X	1.20	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 008	1	ND VIU,H,SC,VNBC	0.00	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 008	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 008	2	ND VIU,H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 008	1	ND VIU,H,SC,VNBC	0.00	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 008	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 008	1	ND VIU,H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 008	1	ND VIU,H,VNBC	0.00	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 008	2	ND VRIU,H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 008	1	ND VIU,H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 008	1	ND VIU,H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 008	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 008	1	ND VIU,H,SC,VNBC	0.00	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 008	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 008	1	ND VIU,H,SC,VNBC	0.00	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 008	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 008	1	ND VIU,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 008	1	ND VIU,H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 008	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 008	1	ND VIU,H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 018	1	DNQ VRIP,H,SC,VNBC		ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 018	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 018	2	VRIP,H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 018	1	DNQ VRIP,H,SC,VNBC		ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 018	1	DNQ H,J,SC,VNBC	0.17	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 018	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 018	1	ND H,VNBC	0.00	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 018	2	DNQ H,J,SC,VNBC	0.11	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 018	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 018	1	DNQ VRIP,H,SC,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 018	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 018	1	DNQ VRIP,H,SC,VNBC		ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 018	1	DNQ H,J,SC,VNBC	0.34	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 018	1	DNQ VRIP,H,SC,VNBC		ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 018	1	DNQ H,J,SC,VNBC	0.23	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 018	1	DNQ SC,VNBC	0.21	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 018	1	VRIP,H,SC,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 018	1	H,SC,VNBC	0.33	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 018	1	VRIP,H,SC,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 028	1	VRIP,H,SC,VNBC		ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 028	1	VIL,H,SC,VRIP,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 028	2	VRIP,H,IL,SC,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 028	1	VRIP,H,SC,VNBC		ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 028	1	VIL,H,SC,VRIP,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 028	1	VRIP,H,SC,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 028	1	DNQ VRIP,H,VNBC		ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 028	2	VIL,H,SC,VRIP,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 028	1	DNQ VRIP,H,SC,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 028	1	DNQ VRIP,H,SC,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 028	1	VIL,H,SC,VRIP,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 028	1	DNQ VRIP,H,SC,VNBC		ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 028	1	VIL,H,SC,VRIP,VNBC		ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 028	1	DNQ VRIP,H,SC,VNBC		ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 028	1	VIL,H,SC,VRIP,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 028	1	DNQ VRIP,SC,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 028	1	VRIP,H,SC,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 028	1	VIL,H,SC,VRIP,VNBC		ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 028	1	VRIP,H,SC,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 031	1	VRIP,H,SC,VNBC		ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 031	1	DNQ H,J,SC,VRIP,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 031	2	VRIP,H,IL,SC,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 031	1	VRIP,H,SC,VNBC		ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 031	1	DNQ H,J,SC,VRIP,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 031	1	VRIP,H,SC,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 031	1	DNQ VRIP,H,VNBC		ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 031	2	DNQ H,J,SC,VRIP,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 031	1	VRIP,H,SC,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 031	1	VRIP,H,SC,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 031	1	DNQ H,J,SC,VRIP,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 031	1	DNQ VRIP,H,SC,VNBC		ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 031	1	DNQ H,J,SC,VRIP,VNBC		ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 031	1	DNQ VRIP,H,SC,VNBC		ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 031	1	H,SC,VRIP,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 031	1	DNQ SC,VNBC	0.37	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 031	1	VRIP,H,SC,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 031	1	H,SC,VRIP,VNBC		ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 031	1	VRIP,H,SC,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 033	1	DNQ H,SC,VNBC	0.31	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 033	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 033	2	H,SC,VNBC	0.30	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 033	1	DNQ H,SC,VNBC	0.36	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 033	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 033	1	DNQ H,SC,VNBC	0.19	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 033	1	ND H,VNBC	0.00	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 033	2	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 033	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 033	1	DNQ H,SC,VNBC	0.17	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 033	1	DNQ H,J,SC,VNBC	0.15	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 033	1	DNQ H,SC,VNBC	0.25	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 033	1	ND H,SC,VNBC	0.00	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 033	1	DNQ H,SC,VNBC	0.38	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 033	1	DNQ H,J,SC,VNBC	0.23	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 033	1	ND SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 033	1	DNQ H,SC,VNBC	0.28	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 033	1	DNQ H,J,SC,VNBC	0.18	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 033	1	H,SC,VNBC	0.34	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 044	1	VRIP,H,SC,VNBC		ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 044	1	VIL,H,SC,VRIP,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 044	2	VRIP,H,SC,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 044	1	VRIP,H,SC,VNBC		ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 044	1	DNQ VIL,H,J,SC,VRIP,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 044	1	VRIP,H,SC,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 044	1	ND VRIP,H,VNBC	0.00	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 044	2	VIL,H,SC,VRIP,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 044	1	DNQ VRIP,H,SC,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 044	1	VRIP,H,SC,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 044	1	VIL,H,SC,VRIP,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 044	1	VRIP,H,SC,VNBC		ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 044	1	VIL,H,SC,VIP,VNBC	0.65	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 044	1	VRIP,H,SC,VNBC		ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 044	1	VIL,H,SC,VIP,VNBC	1.09	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 044	1	SC,VNBC	0.85	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 044	1	DNQ VRIP,H,SC,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 044	1	DNQ VIL,H,J,SC,VRIP,VNBC		ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 044	1	VRIP,H,SC,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 049	1	H,SC,VNBC	0.48	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 049	1	DNQ H,J,SC,VNBC	0.17	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 049	2	DNQ H,SC,VNBC	0.13	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 049	1	DNQ H,SC,VNBC	0.26	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 049	1	DNQ H,J,SC,VNBC	0.15	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 049	1	DNQ H,SC,VNBC	0.19	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 049	1	ND H,VNBC	0.00	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 049	2	DNQ H,J,SC,VNBC	0.13	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 049	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 049	1	DNQ H,SC,VNBC	0.17	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 049	1	DNQ H,J,SC,VNBC	0.18	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 049	1	DNQ H,SC,VNBC	0.25	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 049	1	DNQ H,J,SC,VNBC	0.39	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 049	1	DNQ H,SC,VNBC	0.43	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 049	1	H,SC,VNBC	0.51	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 049	1	ND SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 049	1	DNQ H,SC,VNBC	0.31	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 049	1	DNQ H,J,SC,VNBC	0.19	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 049	1	H,SC,VNBC	0.27	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 052	1	VRIP,VIL,H,SC,VNBC		ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 052	1	H,SC,VRIP,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 052	2	VRIP,VIL,H,SC,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 052	1	VRIP,VIL,H,SC,VNBC		ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 052	1	H,SC,VRIP,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 052	1	VRIP,VIL,H,SC,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 052	1	VRIP,VIL,H,VNBC		ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 052	2	H,IL,SC,VRIP,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 052	1	VRIP,VIL,H,SC,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 052	1	VRIP,VIL,H,SC,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 052	1	H,SC,VRIP,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 052	1	VRIP,VIL,H,SC,VNBC		ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 052	1	H,SC,VRIP,VNBC		ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 052	1	VRIP,VIL,H,SC,VNBC		ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 052	1	H,SC,VIP,VNBC	1.15	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 052	1	VRIP,VIL,SC,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 052	1	VRIP,VIL,H,SC,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 052	1	H,SC,VRIP,VNBC		ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 052	1	VRIP,VIL,H,SC,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 056	1	ND H,SC,VNBC	0.00	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 056	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 056	2	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 056	1	ND H,SC,VNBC	0.00	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 056	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 056	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 056	1	ND H,VNBC	0.00	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 056	2	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 056	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 056	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 056	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 056	1	ND H,SC,VNBC	0.00	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 056	1	ND H,SC,VNBC	0.00	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 056	1	ND H,SC,VNBC	0.00	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 056	1	DNQ H,J,SC,VNBC	0.19	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 056	1	ND SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 056	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 056	1	ND H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 056	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 060	1	ND H,SC,VNBC	0.00	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 060	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 060	2	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 060	1	ND H,SC,VNBC	0.00	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 060	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 060	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 060	1	ND H,VNBC	0.00	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 060	2	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 060	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 060	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 060	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 060	1	ND H,SC,VNBC	0.00	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 060	1	ND H,SC,VNBC	0.00	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 060	1	ND H,SC,VNBC	0.00	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 060	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 060	1	ND SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 060	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 060	1	ND H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 060	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 066	1	H,SC,VIP,VNBC	0.75	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 066	1	VIL,H,SC,VNBC	0.37	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 066	2	VRIP,H,IL,SC,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 066	1	VRIP,H,SC,VNBC		ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 066	1	VIL,H,SC,VNBC	0.33	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 066	1	VRIP,H,SC,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 066	1	DNQ VRIP,H,VNBC		ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 066	2	H,IL,SC,VNBC	0.51	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 066	1	DNQ VRIP,H,SC,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 066	1	H,SC,VRIP,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 066	1	VIL,H,SC,VNBC	0.50	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 066	1	H,SC,VIP,VNBC	1.23	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 066	1	VIL,H,SC,VNBC	1.00	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 066	1	H,SC,VIP,VNBC	0.87	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 066	1	VIL,H,SC,VNBC	3.21	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 066	1	SC,VIP,VNBC	2.50	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 066	1	VRIP,H,SC,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 066	1	DNQ VIL,H,J,SC,VNBC	0.21	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 066	1	VRIP,H,SC,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 070	1	VRIP,H,SC,VNBC		ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 070	1	VIL,H,SC,VRIP,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 070	2	VRIP,H,SC,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 070	1	VRIP,H,SC,VNBC		ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 070	1	VIL,H,SC,VRIP,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 070	1	VRIP,H,SC,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 070	1	VRIP,H,VNBC		ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 070	2	H,IL,SC,VRIP,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 070	1	VRIP,H,SC,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 070	1	VRIP,H,SC,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 070	1	VIL,H,SC,VRIP,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 070	1	VRIP,H,SC,VNBC		ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 070	1	VIL,H,SC,VRIP,VNBC		ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 070	1	VRIP,H,SC,VNBC		ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 070	1	VIL,H,SC,VIP,VNBC	0.95	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 070	1	SC,VNBC	0.74	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 070	1	VRIP,H,SC,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 070	1	VIL,H,SC,VRIP,VNBC		ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 070	1	VRIP,H,SC,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 074	1	DNQ H,SC,VNBC	0.27	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 074	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 074	2	DNQ H,SC,VNBC	0.33	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 074	1	ND H,SC,VNBC	0.00	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 074	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 074	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 074	1	ND H,VNBC	0.00	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 074	2	DNQ H,J,SC,VNBC	0.11	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 074	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 074	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 074	1	DNQ H,J,SC,VNBC	0.14	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 074	1	ND H,SC,VNBC	0.00	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 074	1	ND H,SC,VNBC	0.00	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 074	1	ND H,SC,VNBC	0.00	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 074	1	H,SC,VNBC	0.34	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 074	1	DNQ SC,VNBC	0.19	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 074	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 074	1	ND H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 074	1	DNQ H,SC,VNBC	0.20	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 087	1	H,SC,VNBC	0.61	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 087	1	H,SC,VNBC	0.35	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 087	2	H,SC,VNBC	0.32	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 087	1	DNQ H,SC,VNBC	0.43	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 087	1	H,SC,VNBC	0.37	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 087	1	H,SC,VNBC	0.28	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 087	1	DNQ H,VNBC	0.45	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 087	2	H,SC,VNBC	0.56	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 087	1	DNQ H,SC,VNBC	0.22	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 087	1	H,SC,VNBC	0.28	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 087	1	H,SC,VNBC	0.38	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 087	1	H,SC,VNBC	0.59	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 087	1	H,SC,VNBC	0.52	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 087	1	H,SC,VNBC	0.75	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 087	1	H,SC,VNBC	0.76	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 087	1	SC,VNBC	1.05	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 087	1	DNQ H,SC,VNBC	0.28	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 087	1	ND H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 087	1	DNQ H,SC,VNBC	0.23	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 095	1	H,SC,VIP,VNBC	1.26	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 095	1	H,SC,VRIP,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 095	2	VRIP,H,SC,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 095	1	VRIP,H,SC,VNBC		ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 095	1	H,SC,VRIP,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 095	1	VRIP,H,SC,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 095	1	VRIP,H,VNBC		ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 095	2	H,SC,VIP,VNBC	0.82	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 095	1	VRIP,H,SC,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 095	1	VRIP,H,SC,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 095	1	H,SC,VRIP,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 095	1	H,SC,VIP,VNBC	1.24	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 095	1	H,SC,VIP,VNBC	0.97	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 095	1	H,SC,VIP,VNBC	1.37	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 095	1	H,SC,VIP,VNBC	1.19	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 095	1	SC,VIP,VNBC	1.46	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 095	1	VRIP,H,SC,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 095	1	DNQ H,J,SC,VRIP,VNBC		ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 095	1	VRIP,H,SC,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 097	1	H,SC,VNBC	0.40	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 097	1	DNQ H,J,SC,VNBC	0.14	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 097	2	DNQ H,SC,VNBC	0.18	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 097	1	DNQ H,SC,VNBC	0.27	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 097	1	DNQ H,J,SC,VNBC	0.14	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 097	1	DNQ H,SC,VNBC	0.16	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 097	1	ND H,VNBC	0.00	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 097	2	DNQ H,J,SC,VNBC	0.15	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 097	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 097	1	DNQ H,SC,VNBC	0.15	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 097	1	DNQ H,J,SC,VNBC	0.18	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 097	1	H,SC,VNBC	0.38	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 097	1	DNQ H,J,SC,VNBC	0.28	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 097	1	DNQ H,SC,VNBC	0.33	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 097	1	H,SC,VNBC	0.61	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 097	1	SC,VNBC	0.74	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 097	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 097	1	ND H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 097	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 099	1	H,SC,VNBC	0.61	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 099	1	DNQ VIL,H,J,SC,VNBC	0.19	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 099	2	DNQ H,SC,VNBC	0.21	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 099	1	DNQ H,SC,VNBC	0.37	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 099	1	DNQ VIL,H,J,SC,VNBC	0.20	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 099	1	DNQ H,SC,VNBC	0.25	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 099	1	DNQ H,VNBC	0.49	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 099	2	VIL,H,SC,VNBC	0.28	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 099	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 099	1	DNQ H,SC,VNBC	0.20	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 099	1	VIL,H,SC,VNBC	0.34	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 099	1	H,SC,VNBC	0.38	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 099	1	DNQ VIL,H,J,SC,VNBC	0.37	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 099	1	H,SC,VNBC	0.76	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 099	1	VIL,H,SC,VNBC	0.60	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 099	1	SC,VNBC	0.72	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 099	1	DNQ H,SC,VNBC	0.23	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 099	1	ND VIL,H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 099	1	DNQ H,SC,VNBC	0.16	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 101	1	H,SC,VIP,VNBC	1.58	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 101	1	H,SC,VRIP,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 101	2	VRIP,H,SC,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 101	1	VRIP,H,SC,VNBC		ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 101	1	H,SC,VRIP,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 101	1	VRIP,H,SC,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 101	1	VRIP,H,VNBC		ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 101	2	H,IL,SC,VIP,VNBC	1.02	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 101	1	VRIP,H,SC,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 101	1	VRIP,H,SC,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 101	1	H,SC,VRIP,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 101	1	VRIP,H,SC,VNBC		ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 101	1	H,SC,VIP,VNBC	1.15	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 101	1	H,SC,VIP,VNBC	1.90	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 101	1	H,SC,VIP,VNBC	1.49	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 101	1	SC,VIP,VNBC	2.03	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 101	1	VRIP,H,SC,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 101	1	DNQ H,J,SC,VRIP,VNBC		ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 101	1	VRIP,H,SC,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 105	1	DNQ H,SC,VNBC	0.33	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 105	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 105	2	DNQ H,SC,VNBC	0.23	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 105	1	DNQ H,SC,VNBC	0.26	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 105	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 105	1	DNQ H,SC,VNBC	0.20	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 105	1	ND H,VNBC	0.00	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 105	2	DNQ H,J,SC,VNBC	0.10	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 105	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 105	1	DNQ H,SC,VNBC	0.20	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 105	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 105	1	DNQ H,SC,VNBC	0.23	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 105	1	ND H,SC,VNBC	0.00	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 105	1	DNQ H,SC,VNBC	0.45	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 105	1	H,SC,VNBC	0.33	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 105	1	SC,VNBC	0.41	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 105	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 105	1	ND H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 105	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 110	1	H,SC,VDO,VIP,VIL,VNBC	1.66	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 110	1	VIU,VIL,H,SC,VRIP,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 110	2	VRIP,VIL,H,IL,SC,VDO,VNBC	1.47	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 110	1	VRIP,VIL,H,SC,VDO,NBC		ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 110	1	VIU,VIL,H,SC,VRIP,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 110	1	VRIP,VIL,H,SC,VDO,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 110	1	VRIP,VIL,H,VDO,VNBC		ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 110	2	VIU,H,IL,SC,VIP,VNBC	0.96	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 110	1	VRIP,VIL,H,SC,VDO,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 110	1	VRIP,VIL,H,SC,VDO,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 110	1	VIU,VIL,H,SC,VRIP,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 110	1	H,SC,VDO,VIP,VIL,VNBC	1.63	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 110	1	VIU,VIL,H,SC,VIP,VNBC	0.90	ug/kg	0.23	DFG-	WPCL_L-523-537-

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
											WPCL	04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 110	1	H,SC,VDO,VIP,VIL,VNBC	1.73	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 110	1	VIU,VIL,H,SC,VIP,VNBC	1.81	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 110	1	SC,VDO,VIP,VIL,VNBC	2.25	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 110	1	VRIP,VIL,H,SC,VDO,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 110	1	DNQ VIU,VIL,H,J,SC,VRIP,VNBC		ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 110	1	VRIP,VIL,H,SC,VDO,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 118	1	VRIP,H,SC,VNBC		ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 118	1	VIL,H,SC,VRIP,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 118	2	VRIP,H,SC,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 118	1	VRIP,H,SC,VNBC		ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 118	1	VIL,H,SC,VRIP,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 118	1	VRIP,H,SC,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 118	1	VRIP,H,VNBC		ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 118	2	H,IL,SC,VIP,VNBC	1.24	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 118	1	VRIP,H,SC,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 118	1	VRIP,H,SC,VNBC		ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 118	1	VIL,H,SC,VIP,VNBC	0.91	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 118	1	VRIP,H,SC,VNBC		ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 118	1	VIL,H,SC,VIP,VNBC	1.06	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 118	1	H,SC,VIP,VNBC	2.05	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 118	1	VIL,H,SC,VIP,VNBC	1.61	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 118	1	SC,VIP,VNBC	2.32	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 118	1	VRIP,H,SC,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 118	1	VIL,H,SC,VRIP,VNBC		ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 118	1	VRIP,H,SC,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 128	1	DNQ H,SC,VNBC	0.22	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 128	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 128	2	ND H,SC,VNBC	0.09	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 128	1	ND H,SC,VNBC	0.00	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 128	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 128	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 128	1	ND H,VNBC	0.00	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 128	2	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 128	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 128	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 128	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 128	1	DNQ H,SC,VNBC	0.22	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 128	1	ND H,SC,VNBC	0.00	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 128	1	ND H,SC,VNBC	0.00	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 128	1	DNQ H,J,SC,VNBC	0.21	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 128	1	DNQ SC,VNBC	0.30	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 128	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 128	1	ND H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 128	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 138	1	H,SC,VIP,VNBC	2.72	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 138	1	H,SC,VNBC	1.23	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 138	2	H,SC,VIP,VNBC	1.57	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 138	1	H,SC,VIP,VNBC	0.97	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 138	1	H,SC,VNBC	0.61	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 138	1	VRIP,H,SC,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 138	1	H,VIP,VNBC	1.45	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 138	2	H,SC,VNBC	1.00	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 138	1	VRIP,H,SC,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 138	1	H,SC,VIP,VNBC	0.92	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 138	1	H,SC,VNBC	1.18	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 138	1	H,SC,VIP,VNBC	2.22	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 138	1	H,SC,VNBC	1.21	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 138	1	H,SC,VIP,VNBC	2.34	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 138	1	H,SC,VNBC	2.36	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 138	1	SC,VIP,VNBC	3.48	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 138	1	VRIP,H,SC,VNBC		ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 138	1	DNQ H,J,SC,VNBC	0.17	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 138	1	VRIP,H,SC,VNBC		ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 141	1	H,SC,VNBC	0.39	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 141	1	DNQ H,J,SC,VNBC	0.20	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 141	2	DNQ H,SC,VNBC	0.24	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 141	1	ND H,SC,VNBC	0.00	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 141	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 141	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 141	1	ND H,VNBC	0.00	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 141	2	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 141	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 141	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 141	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 141	1	DNQ H,SC,VNBC	0.25	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 141	1	ND H,SC,VNBC	0.00	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 141	1	ND H,SC,VNBC	0.00	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 141	1	H,SC,VNBC	0.43	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 141	1	SC,VNBC	0.49	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 141	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 141	1	ND H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 141	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 149	1	H,SC,VNBC	2.07	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 149	1	H,SC,VNBC	1.15	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 149	2	H,SC,VNBC	1.30	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 149	1	H,SC,VNBC	0.52	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 149	1	H,SC,VNBC	0.32	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 149	1	H,SC,VNBC	0.32	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 149	1	H,VNBC	0.73	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 149	2	H,SC,VNBC	0.60	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 149	1	H,SC,VNBC	0.52	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 149	1	H,SC,VNBC	0.50	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 149	1	H,SC,VNBC	0.72	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 149	1	H,SC,VNBC	1.42	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 149	1	H,SC,VNBC	0.81	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 149	1	H,SC,VNBC	1.39	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 149	1	H,SC,VNBC	1.90	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 149	1	SC,VNBC	2.32	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 149	1	DNQ H,SC,VNBC	0.29	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 149	1	ND H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 149	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 151	1	H,SC,VNBC	0.71	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 151	1	H,SC,VNBC	0.38	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 151	2	H,SC,VNBC	0.54	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 151	1	ND H,SC,VNBC	0.00	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 151	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 151	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 151	1	ND H,VNBC	0.00	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 151	2	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 151	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 151	1	DNQ H,SC,VNBC	0.15	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 151	1	DNQ H,J,SC,VNBC	0.15	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 151	1	H,SC,VNBC	0.38	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 151	1	ND H,SC,VNBC	0.00	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 151	1	DNQ H,SC,VNBC	0.35	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 151	1	H,SC,VNBC	0.69	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 151	1	SC,VNBC	0.60	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 151	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 151	1	ND H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 151	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 153	1	H,SC,VNBC	2.22	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 153	1	H,SC,VNBC	0.94	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 153	2	H,SC,VNBC	1.18	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 153	1	H,SC,VNBC	0.66	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 153	1	H,SC,VNBC	0.37	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 153	1	H,SC,VNBC	0.36	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 153	1	H,VNBC	1.10	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 153	2	H,SC,VNBC	0.68	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 153	1	H,SC,VNBC	0.48	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 153	1	H,SC,VNBC	0.64	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 153	1	H,SC,VNBC	1.02	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 153	1	H,SC,VNBC	1.33	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 153	1	H,SC,VNBC	0.81	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 153	1	H,SC,VNBC	1.81	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 153	1	H,SC,VNBC	1.78	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 153	1	SC,VNBC	2.29	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 153	1	H,SC,VNBC	0.36	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 153	1	ND H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 153	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 156	1	ND H,SC,VNBC	0.00	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 156	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 156	2	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 156	1	ND H,SC,VNBC	0.00	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 156	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 156	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 156	1	ND H,VNBC	0.00	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 156	2	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 156	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 156	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 156	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 156	1	ND H,SC,VNBC	0.00	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 156	1	ND H,SC,VNBC	0.00	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 156	1	ND H,SC,VNBC	0.00	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 156	1	DNQ H,J,SC,VNBC	0.17	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 156	1	DNQ SC,VNBC	0.27	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 156	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 156	1	ND H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 156	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 158	1	ND H,SC,VNBC	0.00	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 158	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 158	2	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 158	1	ND H,SC,VNBC	0.00	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 158	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 158	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 158	1	ND H,VNBC	0.00	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 158	2	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 158	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 158	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 158	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 158	1	ND H,SC,VNBC	0.00	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 158	1	ND H,SC,VNBC	0.00	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 158	1	ND H,SC,VNBC	0.00	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 158	1	DNQ H,J,SC,VNBC	0.23	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 158	1	DNQ SC,VNBC	0.25	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 158	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 158	1	ND H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 158	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 170	1	H,SC,VNBC	0.73	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 170	1	H,SC,VNBC	0.39	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 170	2	H,SC,VNBC	0.43	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 170	1	ND H,SC,VNBC	0.00	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 170	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 170	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 170	1	ND H,VNBC	0.00	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 170	2	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 170	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 170	1	DNQ H,SC,VNBC	0.14	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 170	1	DNQ H,J,SC,VNBC	0.18	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 170	1	H,SC,VNBC	0.38	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 170	1	ND H,SC,VNBC	0.00	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 170	1	ND H,SC,VNBC	0.00	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 170	1	H,SC,VNBC	0.64	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 170	1	SC,VNBC	0.59	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 170	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 170	1	ND H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 170	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 174	1	H,SC,VNBC	0.79	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 174	1	H,SC,VNBC	0.46	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 174	2	H,SC,VNBC	0.55	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 174	1	ND H,SC,VNBC	0.00	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 174	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 174	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 174	1	ND H,VNBC	0.00	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 174	2	DNQ H,J,SC,VNBC	0.11	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 174	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 174	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 174	1	DNQ H,J,SC,VNBC	0.16	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 174	1	H,SC,VNBC	0.41	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 174	1	ND H,SC,VNBC	0.00	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 174	1	ND H,SC,VNBC	0.00	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 174	1	H,SC,VNBC	1.00	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 174	1	SC,VNBC	0.79	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 174	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 174	1	ND H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 174	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 177	1	H,SC,VNBC	0.51	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 177	1	DNQ H,J,SC,VNBC	0.23	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 177	2	H,SC,VNBC	0.32	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 177	1	ND H,SC,VNBC	0.00	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 177	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 177	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 177	1	ND H,VNBC	0.00	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 177	2	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 177	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 177	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 177	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 177	1	DNQ H,SC,VNBC	0.25	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 177	1	ND H,SC,VNBC	0.00	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 177	1	ND H,SC,VNBC	0.00	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 177	1	H,SC,VNBC	0.47	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 177	1	DNQ SC,VNBC	0.31	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 177	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 177	1	ND H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 177	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 180	1	H,SC,VNBC	1.77	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 180	1	H,SC,VNBC	1.02	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 180	2	H,SC,VNBC	1.15	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 180	1	ND H,SC,VNBC	0.00	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 180	1	DNQ H,J,SC,VNBC	0.14	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 180	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 180	1	ND H,VNBC	0.00	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 180	2	H,SC,VNBC	0.37	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 180	1	DNQ H,SC,VNBC	0.29	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 180	1	H,SC,VNBC	0.30	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 180	1	H,SC,VNBC	0.60	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 180	1	H,SC,VNBC	1.03	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 180	1	DNQ H,J,SC,VNBC	0.45	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 180	1	H,SC,VNBC	0.98	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 180	1	H,SC,VNBC	2.37	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 180	1	SC,VNBC	2.08	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 180	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 180	1	ND H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 180	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 183	1	H,SC,VNBC	0.41	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 183	1	DNQ H,J,SC,VNBC	0.21	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 183	2	DNQ H,SC,VNBC	0.26	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 183	1	ND H,SC,VNBC	0.00	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 183	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 183	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 183	1	ND H,VNBC	0.00	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 183	2	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 183	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 183	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 183	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 183	1	DNQ H,SC,VNBC	0.18	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 183	1	ND H,SC,VNBC	0.00	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 183	1	ND H,SC,VNBC	0.00	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 183	1	H,SC,VNBC	0.60	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 183	1	SC,VNBC	0.48	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 183	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 183	1	ND H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 183	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 187	1	H,SC,VNBC	1.08	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 187	1	H,SC,VNBC	0.62	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 187	2	H,SC,VNBC	0.61	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 187	1	ND H,SC,VNBC	0.00	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 187	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 187	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 187	1	ND H,VNBC	0.00	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 187	2	DNQ H,J,SC,VNBC	0.10	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 187	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 187	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 187	1	H,SC,VNBC	0.44	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 187	1	H,SC,VNBC	0.52	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 187	1	ND H,SC,VNBC	0.00	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 187	1	H,SC,VNBC	0.69	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 187	1	H,SC,VNBC	1.51	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 187	1	SC,VNBC	1.24	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 187	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 187	1	ND H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 187	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 194	1	H,SC,VNBC	0.41	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 194	1	DNQ H,J,SC,VNBC	0.20	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 194	2	DNQ H,SC,VNBC	0.20	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 194	1	ND H,SC,VNBC	0.00	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 194	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 194	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 194	1	ND H,VNBC	0.00	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 194	2	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 194	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 194	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 194	1	DNQ H,J,SC,VNBC	0.17	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 194	1	DNQ H,SC,VNBC	0.22	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 194	1	ND H,SC,VNBC	0.00	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 194	1	ND H,SC,VNBC	0.00	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 194	1	H,SC,VNBC	1.13	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 194	1	SC,VNBC	0.76	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 194	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 194	1	ND H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 194	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 195	1	ND H,SC,VNBC	0.00	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 195	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 195	2	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 195	1	ND H,SC,VNBC	0.00	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 195	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 195	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 195	1	ND H,VNBC	0.00	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 195	2	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 195	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 195	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 195	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 195	1	ND H,SC,VNBC	0.00	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 195	1	ND H,SC,VNBC	0.00	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 195	1	ND H,SC,VNBC	0.00	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 195	1	H,SC,VNBC	0.38	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 195	1	ND SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 195	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 195	1	ND H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 195	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 201	1	H,SC,VNBC	0.44	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 201	1	H,SC,VNBC	0.26	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 201	2	H,SC,VNBC	0.29	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 201	1	ND H,SC,VNBC	0.00	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 201	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 201	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 201	1	ND H,VNBC	0.00	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 201	2	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 201	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 201	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 201	1	DNQ H,J,SC,VNBC	0.22	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 201	1	DNQ H,SC,VNBC	0.28	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 201	1	ND H,SC,VNBC	0.00	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 201	1	DNQ H,SC,VNBC	0.32	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 201	1	H,SC,VNBC	1.58	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 201	1	SC,VNBC	1.14	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 201	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 201	1	ND H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 201	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	COYCRKLWR	18-Apr-05	3ORG	PCB	PCB 203	1	DNQ H,SC,VNBC	0.34	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	COYCRKUP	01-Nov-04	3ORG	PCB	PCB 203	1	DNQ H,J,SC,VNBC	0.19	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	COYCRKUP	18-Apr-05	3ORG	PCB	PCB 203	2	DNQ H,SC,VNBC	0.25	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	NAPRIVLWR	19-Apr-05	3ORG	PCB	PCB 203	1	ND H,SC,VNBC	0.00	ug/kg	0.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	NAPRIVUP	02-Nov-04	3ORG	PCB	PCB 203	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	NAPRIVUP	19-Apr-05	3ORG	PCB	PCB 203	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	PETRIVLWR	20-Apr-05	3ORG	PCB	PCB 203	1	ND H,VNBC	0.00	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	PETRIVUP	02-Nov-04	3ORG	PCB	PCB 203	2	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	PETRIVUP	20-Apr-05	3ORG	PCB	PCB 203	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	PCB	PCB 203	1	ND H,SC,VNBC	0.00	ug/kg	0.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANLORCRKUP	03-Nov-04	3ORG	PCB	PCB 203	1	DNQ H,J,SC,VNBC	0.20	ug/kg	0.13	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANLORCRKUP	20-Apr-05	3ORG	PCB	PCB 203	1	DNQ H,SC,VNBC	0.32	ug/kg	0.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	PCB	PCB 203	1	ND H,SC,VNBC	0.00	ug/kg	0.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	PCB	PCB 203	1	ND H,SC,VNBC	0.00	ug/kg	0.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SANMATCRKUP	04-Nov-04	3ORG	PCB	PCB 203	1	H,SC,VNBC	1.34	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SANMATCRKUP	18-Apr-05	3ORG	PCB	PCB 203	1	SC,VNBC	0.92	ug/kg	0.18	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_PCB
2005-04	SUICRKLWR	19-Apr-05	3ORG	PCB	PCB 203	1	ND H,SC,VNBC	0.00	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB
2004-11	SUICRKUP	03-Nov-04	3ORG	PCB	PCB 203	1	ND H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_PCB
2005-04	SUICRKUP	19-Apr-05	3ORG	PCB	PCB 203	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_PCB

Appendix Table C.5. Sediment synthethic biocides (pesticides) results from the ambient tributary study in watersheds of the San Francisco Estuary (2004-2005). N = number of replicates. % solids were reported by each analytical laboratory. DFG-WPCL analyzed all trace organic samples in this study (see Appendix C - Table C.3). Lab codes are defined in table 1.1.

Cyclopentadienes

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	COYCRKLWR	18-Apr-05	3ORG	4CYCPENT	Aldrin	1	ND H,SC,VNBC	0.00	ug/kg	0.49	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	COYCRKUP	01-Nov-04	3ORG	4CYCPENT	Aldrin	1	ND H,SC,VNBC	0.00	ug/kg	0.33	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	COYCRKUP	18-Apr-05	3ORG	4CYCPENT	Aldrin	2	ND H,SC,VNBC	0.00	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	4CYCPENT	Aldrin	1	ND H,SC,VNBC	0.00	ug/kg	0.57	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	NAPRIVUP	02-Nov-04	3ORG	4CYCPENT	Aldrin	1	ND H,SC,VNBC	0.00	ug/kg	0.36	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	NAPRIVUP	19-Apr-05	3ORG	4CYCPENT	Aldrin	1	ND H,SC,VNBC	0.00	ug/kg	0.36	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	PETRIVLWR	20-Apr-05	3ORG	4CYCPENT	Aldrin	1	ND H,SC,VNBC	0.00	ug/kg	0.92	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	PETRIVUP	02-Nov-04	3ORG	4CYCPENT	Aldrin	2	ND H,SC,VNBC	0.00	ug/kg	0.47	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	PETRIVUP	20-Apr-05	3ORG	4CYCPENT	Aldrin	1	ND H,SC,VNBC	0.00	ug/kg	0.46	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	4CYCPENT	Aldrin	1	ND H,SC,VNBC	0.00	ug/kg	0.34	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	4CYCPENT	Aldrin	1	ND H,SC,VNBC	0.00	ug/kg	0.34	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	4CYCPENT	Aldrin	1	DNQ H,SC,VNBC	0.50	ug/kg	0.44	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	4CYCPENT	Aldrin	1	ND H,SC,VNBC	0.00	ug/kg	0.61	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	4CYCPENT	Aldrin	1	ND H,SC,VNBC	0.00	ug/kg	0.80	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	4CYCPENT	Aldrin	1	DNQ H,J,SC,VNBC	0.52	ug/kg	0.37	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	4CYCPENT	Aldrin	1	DNQ SC,VNBC	0.55	ug/kg	0.48	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_OCH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SUICRKLWR	19-Apr-05	3ORG	4CYCPENT	Aldrin	1	ND H,SC,VNBC	0.00	ug/kg	0.47	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SUICRKUP	03-Nov-04	3ORG	4CYCPENT	Aldrin	1	ND H,SC,VNBC	0.00	ug/kg	0.40	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SUICRKUP	19-Apr-05	3ORG	4CYCPENT	Aldrin	1	ND H,SC,VNBC	0.00	ug/kg	0.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	COYCRKLWR	18-Apr-05	3ORG	4CYCPENT	Dieldrin	1	ND H,SC,VNBC	0.00	ug/kg	0.78	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	COYCRKUP	01-Nov-04	3ORG	4CYCPENT	Dieldrin	1	DNQ H,J,SC,VNBC	0.63	ug/kg	0.54	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	COYCRKUP	18-Apr-05	3ORG	4CYCPENT	Dieldrin	2	ND H,SC,VNBC	0.00	ug/kg	0.56	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	4CYCPENT	Dieldrin	1	ND H,SC,VNBC	0.00	ug/kg	0.92	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	NAPRIVUP	02-Nov-04	3ORG	4CYCPENT	Dieldrin	1	ND H,SC,VNBC	0.00	ug/kg	0.58	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	NAPRIVUP	19-Apr-05	3ORG	4CYCPENT	Dieldrin	1	ND H,SC,VNBC	0.00	ug/kg	0.58	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	PETRIVLWR	20-Apr-05	3ORG	4CYCPENT	Dieldrin	1	ND H,SC,VNBC	0.00	ug/kg	1.49	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	PETRIVUP	02-Nov-04	3ORG	4CYCPENT	Dieldrin	2	ND H,SC,VNBC	0.00	ug/kg	0.76	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	PETRIVUP	20-Apr-05	3ORG	4CYCPENT	Dieldrin	1	ND H,SC,VNBC	0.00	ug/kg	0.75	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	4CYCPENT	Dieldrin	1	H,SC,VNBC	1.02	ug/kg	0.55	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	4CYCPENT	Dieldrin	1	H,SC,VNBC	1.43	ug/kg	0.55	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	4CYCPENT	Dieldrin	1	H,SC,VNBC	3.58	ug/kg	0.72	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	4CYCPENT	Dieldrin	1	H,SC,VNBC	2.79	ug/kg	0.98	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	4CYCPENT	Dieldrin	1	H,SC,VNBC	2.00	ug/kg	1.28	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	4CYCPENT	Dieldrin	1	H,SC,VNBC	6.70	ug/kg	0.59	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	4CYCPENT	Dieldrin	1	DNQ SC,VNBC	0.78	ug/kg	0.77	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_OCH
2005-04	SUICRKLWR	19-Apr-05	3ORG	4CYCPENT	Dieldrin	1	ND H,SC,VNBC	0.00	ug/kg	0.75	DFG-	WPCL_L-211-

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
											WPCL	05_BS375_KR_S_OCH
2004-11	SUICRKUP	03-Nov-04	3ORG	4CYCPENT	Dieldrin	1	DNQ H,J,SC,VNBC	0.73	ug/kg	0.64	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SUICRKUP	19-Apr-05	3ORG	4CYCPENT	Dieldrin	1	ND H,SC,VNBC	0.00	ug/kg	0.57	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	COYCRKLWR	18-Apr-05	3ORG	4CYCPENT	Endrin	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	1.75	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	COYCRKUP	01-Nov-04	3ORG	4CYCPENT	Endrin	1	ND VIU,H,SC,VNBC	0.00	ug/kg	1.21	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	COYCRKUP	18-Apr-05	3ORG	4CYCPENT	Endrin	2	ND VRIU,H,SC,VNBC	0.00	ug/kg	1.25	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	4CYCPENT	Endrin	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	2.06	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	NAPRIVUP	02-Nov-04	3ORG	4CYCPENT	Endrin	1	ND VIU,H,SC,VNBC	0.00	ug/kg	1.29	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	NAPRIVUP	19-Apr-05	3ORG	4CYCPENT	Endrin	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	1.30	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	PETRIVLWR	20-Apr-05	3ORG	4CYCPENT	Endrin	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	3.33	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	PETRIVUP	02-Nov-04	3ORG	4CYCPENT	Endrin	2	ND VIU,H,SC,VNBC	0.00	ug/kg	1.70	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	PETRIVUP	20-Apr-05	3ORG	4CYCPENT	Endrin	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	1.68	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	4CYCPENT	Endrin	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	1.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	4CYCPENT	Endrin	1	ND VIU,H,SC,VNBC	0.00	ug/kg	1.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	4CYCPENT	Endrin	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	1.60	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	4CYCPENT	Endrin	1	ND VIU,H,SC,VNBC	0.00	ug/kg	2.20	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	4CYCPENT	Endrin	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	2.87	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	4CYCPENT	Endrin	1	ND VIU,H,SC,VNBC	0.00	ug/kg	1.32	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	4CYCPENT	Endrin	1	ND VRIU,SC,VNBC	0.00	ug/kg	1.73	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_OCH
2005-04	SUICRKLWR	19-Apr-05	3ORG	4CYCPENT	Endrin	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	1.69	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	SUICRKUP	03-Nov-04	3ORG	4CYCPENT	Endrin	1	ND VIU,H,SC,VNBC	0.00	ug/kg	1.44	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SUICRKUP	19-Apr-05	3ORG	4CYCPENT	Endrin	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	1.26	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH

Chlordanes

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	COYCRKLWR	18-Apr-05	3ORG	2CHLR	alpha-Chlordane	1	VIU,H,SC,VNBC	2.22	ug/kg	1.34	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	COYCRKUP	01-Nov-04	3ORG	2CHLR	alpha-Chlordane	1	VRIU,H,SC,VNBC		ug/kg	0.92	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	COYCRKUP	18-Apr-05	3ORG	2CHLR	alpha-Chlordane	2	VIU,H,SC,VNBC	0.98	ug/kg	0.95	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	2CHLR	alpha-Chlordane	1	DNQ VIU,H,SC,VNBC	1.90	ug/kg	1.57	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	NAPRIVUP	02-Nov-04	3ORG	2CHLR	alpha-Chlordane	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	0.98	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	NAPRIVUP	19-Apr-05	3ORG	2CHLR	alpha-Chlordane	1	ND VIU,H,SC,VNBC	0.00	ug/kg	0.99	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	PETRIVLWR	20-Apr-05	3ORG	2CHLR	alpha-Chlordane	1	ND VIU,H,SC,VNBC	0.00	ug/kg	2.54	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	PETRIVUP	02-Nov-04	3ORG	2CHLR	alpha-Chlordane	2	DNQ VRIU,H,J,SC,VNBC		ug/kg	1.29	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	PETRIVUP	20-Apr-05	3ORG	2CHLR	alpha-Chlordane	1	DNQ VIU,H,SC,VNBC	1.63	ug/kg	1.28	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	2CHLR	alpha-Chlordane	1	VIU,H,SC,VNBC	2.67	ug/kg	0.93	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	2CHLR	alpha-Chlordane	1	VRIU,H,SC,VNBC		ug/kg	0.93	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	2CHLR	alpha-Chlordane	1	VIU,H,SC,VNBC	9.55	ug/kg	1.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	2CHLR	alpha-Chlordane	1	VRIU,H,SC,VNBC		ug/kg	1.67	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	2CHLR	alpha-Chlordane	1	VIU,H,SC,VNBC	4.37	ug/kg	2.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	2CHLR	alpha-Chlordane	1	VRIU,H,SC,VNBC		ug/kg	1.01	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SANMATCRKUP	18-Apr-05	3ORG	2CHLR	alpha-Chlordane	1	VIU,SC,VNBC	15.60	ug/kg	1.32	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_OCH
2005-04	SUICRKLWR	19-Apr-05	3ORG	2CHLR	alpha-Chlordane	1	ND VIU,H,SC,VNBC	0.00	ug/kg	1.29	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SUICRKUP	03-Nov-04	3ORG	2CHLR	alpha-Chlordane	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	1.10	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SUICRKUP	19-Apr-05	3ORG	2CHLR	alpha-Chlordane	1	ND VIU,H,SC,VNBC	0.00	ug/kg	0.96	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	COYCRKLWR	18-Apr-05	3ORG	2CHLR	cis-Nonachlor	1	ND H,SC,VNBC	0.00	ug/kg	1.83	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	COYCRKUP	01-Nov-04	3ORG	2CHLR	cis-Nonachlor	1	ND H,SC,VNBC	0.00	ug/kg	1.26	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	COYCRKUP	18-Apr-05	3ORG	2CHLR	cis-Nonachlor	2	ND H,SC,VNBC	0.00	ug/kg	1.30	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	2CHLR	cis-Nonachlor	1	ND H,SC,VNBC	0.00	ug/kg	2.15	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	NAPRIVUP	02-Nov-04	3ORG	2CHLR	cis-Nonachlor	1	ND H,SC,VNBC	0.00	ug/kg	1.35	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	NAPRIVUP	19-Apr-05	3ORG	2CHLR	cis-Nonachlor	1	ND H,SC,VNBC	0.00	ug/kg	1.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	PETRIVLWR	20-Apr-05	3ORG	2CHLR	cis-Nonachlor	1	ND H,SC,VNBC	0.00	ug/kg	3.47	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	PETRIVUP	02-Nov-04	3ORG	2CHLR	cis-Nonachlor	2	ND H,SC,VNBC	0.00	ug/kg	1.77	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	PETRIVUP	20-Apr-05	3ORG	2CHLR	cis-Nonachlor	1	ND H,SC,VNBC	0.00	ug/kg	1.75	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	2CHLR	cis-Nonachlor	1	ND H,SC,VNBC	0.00	ug/kg	1.28	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	2CHLR	cis-Nonachlor	1	ND H,SC,VNBC	0.00	ug/kg	1.28	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	2CHLR	cis-Nonachlor	1	H,SC,VNBC	3.22	ug/kg	1.67	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	2CHLR	cis-Nonachlor	1	ND H,SC,VNBC	0.00	ug/kg	2.29	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	2CHLR	cis-Nonachlor	1	ND H,SC,VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	2CHLR	cis-Nonachlor	1	H,SC,VNBC	5.35	ug/kg	1.38	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	2CHLR	cis-Nonachlor	1	SC,VNBC	5.25	ug/kg	1.80	DFG-	WPCL_L-192-

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
											WPCL	05_BS373_KR_S_OCH
2005-04	SUICRKLWR	19-Apr-05	3ORG	2CHLR	cis-Nonachlor	1	ND H,SC,VNBC	0.00	ug/kg	1.76	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SUICRKUP	03-Nov-04	3ORG	2CHLR	cis-Nonachlor	1	ND H,SC,VNBC	0.00	ug/kg	1.50	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SUICRKUP	19-Apr-05	3ORG	2CHLR	cis-Nonachlor	1	ND H,SC,VNBC	0.00	ug/kg	1.32	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	COYCRKLWR	18-Apr-05	3ORG	2CHLR	gamma-Chlordane	1	VRIU,H,SC,VNBC		ug/kg	0.75	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	COYCRKUP	01-Nov-04	3ORG	2CHLR	gamma-Chlordane	1	VRIU,H,SC,VNBC		ug/kg	0.52	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	COYCRKUP	18-Apr-05	3ORG	2CHLR	gamma-Chlordane	2	VRIU,H,SC,VNBC		ug/kg	0.54	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	2CHLR	gamma-Chlordane	1	DNQ VRIU,H,SC,VNBC		ug/kg	0.89	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	NAPRIVUP	02-Nov-04	3ORG	2CHLR	gamma-Chlordane	1	DNQ VRIU,H,J,SC,VNBC		ug/kg	0.55	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	NAPRIVUP	19-Apr-05	3ORG	2CHLR	gamma-Chlordane	1	DNQ VRIU,H,SC,VNBC		ug/kg	0.56	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	PETRIVLWR	20-Apr-05	3ORG	2CHLR	gamma-Chlordane	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	1.43	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	PETRIVUP	02-Nov-04	3ORG	2CHLR	gamma-Chlordane	2	DNQ VRIU,H,J,SC,VNBC		ug/kg	0.73	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	PETRIVUP	20-Apr-05	3ORG	2CHLR	gamma-Chlordane	1	DNQ VRIU,H,SC,VNBC		ug/kg	0.72	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	2CHLR	gamma-Chlordane	1	VRIU,H,SC,VNBC		ug/kg	0.53	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	2CHLR	gamma-Chlordane	1	VRIU,H,SC,VNBC		ug/kg	0.53	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	2CHLR	gamma-Chlordane	1	VRIU,H,SC,VNBC		ug/kg	0.69	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	2CHLR	gamma-Chlordane	1	VRIU,H,SC,VNBC		ug/kg	0.94	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	2CHLR	gamma-Chlordane	1	VRIU,H,SC,VNBC		ug/kg	1.24	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	2CHLR	gamma-Chlordane	1	VRIU,H,SC,VNBC		ug/kg	0.57	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	2CHLR	gamma-Chlordane	1	VRIU,SC,VNBC		ug/kg	0.74	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_OCH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SUICRKLWR	19-Apr-05	3ORG	2CHLR	gamma-Chlordane	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	0.73	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SUICRKUP	03-Nov-04	3ORG	2CHLR	gamma-Chlordane	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SUICRKUP	19-Apr-05	3ORG	2CHLR	gamma-Chlordane	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	0.54	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	COYCRKLWR	18-Apr-05	3ORG	2CHLR	Heptachlor	1	ND H,SC,VNBC	0.00	ug/kg	0.96	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	COYCRKUP	01-Nov-04	3ORG	2CHLR	Heptachlor	1	ND VIU,H,SC,VNBC	0.00	ug/kg	0.66	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	COYCRKUP	18-Apr-05	3ORG	2CHLR	Heptachlor	2	ND H,SC,VNBC	0.00	ug/kg	0.68	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	2CHLR	Heptachlor	1	ND H,SC,VNBC	0.00	ug/kg	1.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	NAPRIVUP	02-Nov-04	3ORG	2CHLR	Heptachlor	1	ND VIU,H,SC,VNBC	0.00	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	NAPRIVUP	19-Apr-05	3ORG	2CHLR	Heptachlor	1	ND H,SC,VNBC	0.00	ug/kg	0.71	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	PETRIVLWR	20-Apr-05	3ORG	2CHLR	Heptachlor	1	ND H,SC,VNBC	0.00	ug/kg	1.83	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	PETRIVUP	02-Nov-04	3ORG	2CHLR	Heptachlor	2	ND VIU,H,SC,VNBC	0.00	ug/kg	0.93	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	PETRIVUP	20-Apr-05	3ORG	2CHLR	Heptachlor	1	ND H,SC,VNBC	0.00	ug/kg	0.92	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	2CHLR	Heptachlor	1	ND H,SC,VNBC	0.00	ug/kg	0.67	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	2CHLR	Heptachlor	1	ND VIU,H,SC,VNBC	0.00	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	2CHLR	Heptachlor	1	ND H,SC,VNBC	0.00	ug/kg	0.88	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	2CHLR	Heptachlor	1	ND VIU,H,SC,VNBC	0.00	ug/kg	1.21	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	2CHLR	Heptachlor	1	ND H,SC,VNBC	0.00	ug/kg	1.58	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	2CHLR	Heptachlor	1	ND VIU,H,SC,VNBC	0.00	ug/kg	0.73	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	2CHLR	Heptachlor	1	ND SC,VNBC	0.00	ug/kg	0.95	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_OCH
2005-04	SUICRKLWR	19-Apr-05	3ORG	2CHLR	Heptachlor	1	ND H,SC,VNBC	0.00	ug/kg	0.93	DFG-	WPCL_L-211-

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
											WPCL	05_BS375_KR_S_OCH
2004-11	SUICRKUP	03-Nov-04	3ORG	2CHLR	Heptachlor	1	ND VIU,H,SC,VNBC	0.00	ug/kg	0.79	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SUICRKUP	19-Apr-05	3ORG	2CHLR	Heptachlor	1	ND H,SC,VNBC	0.00	ug/kg	0.69	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	COYCRKLWR	18-Apr-05	3ORG	2CHLR	Heptachlor Epoxide	1	ND H,SC,VNBC	0.00	ug/kg	0.94	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	COYCRKUP	01-Nov-04	3ORG	2CHLR	Heptachlor Epoxide	1	DNQ H,J,SC,VNBC	0.72	ug/kg	0.65	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	COYCRKUP	18-Apr-05	3ORG	2CHLR	Heptachlor Epoxide	2	ND H,SC,VNBC	0.00	ug/kg	0.67	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	2CHLR	Heptachlor Epoxide	1	ND H,SC,VNBC	0.00	ug/kg	1.11	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	NAPRIVUP	02-Nov-04	3ORG	2CHLR	Heptachlor Epoxide	1	ND H,SC,VNBC	0.00	ug/kg	0.69	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	NAPRIVUP	19-Apr-05	3ORG	2CHLR	Heptachlor Epoxide	1	ND H,SC,VNBC	0.00	ug/kg	0.70	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	PETRIVLWR	20-Apr-05	3ORG	2CHLR	Heptachlor Epoxide	1	ND H,SC,VNBC	0.00	ug/kg	1.79	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	PETRIVUP	02-Nov-04	3ORG	2CHLR	Heptachlor Epoxide	2	ND H,SC,VNBC	0.00	ug/kg	0.91	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	PETRIVUP	20-Apr-05	3ORG	2CHLR	Heptachlor Epoxide	1	ND H,SC,VNBC	0.00	ug/kg	0.90	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	2CHLR	Heptachlor Epoxide	1	DNQ H,SC,VNBC	0.72	ug/kg	0.66	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	2CHLR	Heptachlor Epoxide	1	DNQ H,J,SC,VNBC	0.79	ug/kg	0.66	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	2CHLR	Heptachlor Epoxide	1	H,SC,VNBC	2.46	ug/kg	0.86	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	2CHLR	Heptachlor Epoxide	1	DNQ H,J,SC,VNBC	1.59	ug/kg	1.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	2CHLR	Heptachlor Epoxide	1	ND H,SC,VNBC	0.00	ug/kg	1.54	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	2CHLR	Heptachlor Epoxide	1	H,SC,VNBC	4.20	ug/kg	0.71	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	2CHLR	Heptachlor Epoxide	1	SC,VNBC	4.42	ug/kg	0.93	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_OCH
2005-04	SUICRKLWR	19-Apr-05	3ORG	2CHLR	Heptachlor Epoxide	1	ND H,SC,VNBC	0.00	ug/kg	0.91	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	SUICRKUP	03-Nov-04	3ORG	2CHLR	Heptachlor Epoxide	1	ND H,SC,VNBC	0.00	ug/kg	0.77	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SUICRKUP	19-Apr-05	3ORG	2CHLR	Heptachlor Epoxide	1	ND H,SC,VNBC	0.00	ug/kg	0.68	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	COYCRKLWR	18-Apr-05	3ORG	2CHLR	Oxychlordane	1	ND H,SC,VNBC	0.00	ug/kg	0.69	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	COYCRKUP	01-Nov-04	3ORG	2CHLR	Oxychlordane	1	ND H,SC,VNBC	0.00	ug/kg	0.47	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	COYCRKUP	18-Apr-05	3ORG	2CHLR	Oxychlordane	2	ND H,SC,VNBC	0.00	ug/kg	0.49	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	2CHLR	Oxychlordane	1	ND H,SC,VNBC	0.00	ug/kg	0.81	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	NAPRIVUP	02-Nov-04	3ORG	2CHLR	Oxychlordane	1	ND H,SC,VNBC	0.00	ug/kg	0.51	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	NAPRIVUP	19-Apr-05	3ORG	2CHLR	Oxychlordane	1	ND H,SC,VNBC	0.00	ug/kg	0.51	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	PETRIVLWR	20-Apr-05	3ORG	2CHLR	Oxychlordane	1	ND H,SC,VNBC	0.00	ug/kg	1.30	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	PETRIVUP	02-Nov-04	3ORG	2CHLR	Oxychlordane	2	ND H,SC,VNBC	0.00	ug/kg	0.66	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	PETRIVUP	20-Apr-05	3ORG	2CHLR	Oxychlordane	1	ND H,SC,VNBC	0.00	ug/kg	0.66	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	2CHLR	Oxychlordane	1	ND H,SC,VNBC	0.00	ug/kg	0.48	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	2CHLR	Oxychlordane	1	ND H,SC,VNBC	0.00	ug/kg	0.48	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	2CHLR	Oxychlordane	1	ND H,SC,VNBC	0.00	ug/kg	0.63	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	2CHLR	Oxychlordane	1	ND H,SC,VNBC	0.00	ug/kg	0.86	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	2CHLR	Oxychlordane	1	ND H,SC,VNBC	0.00	ug/kg	1.13	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	2CHLR	Oxychlordane	1	DNQ H,J,SC,VNBC	1.07	ug/kg	0.52	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	2CHLR	Oxychlordane	1	DNQ SC,VNBC	1.29	ug/kg	0.68	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_OCH
2005-04	SUICRKLWR	19-Apr-05	3ORG	2CHLR	Oxychlordane	1	ND H,SC,VNBC	0.00	ug/kg	0.66	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SUICRKUP	03-Nov-04	3ORG	2CHLR	Oxychlordane	1	ND H,SC,VNBC	0.00	ug/kg	0.56	DFG-	WPCL_L-523-537-

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
											WPCL	04_BS347_KR_S_OCH
2005-04	SUICRKUP	19-Apr-05	3ORG	2CHLR	Oxychlordane	1	ND H,SC,VNBC	0.00	ug/kg	0.50	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	COYCRKLWR	18-Apr-05	3ORG	2CHLR	trans-Nonachlor	1	DNQ H,SC,VNBC	1.83	ug/kg	0.72	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	COYCRKUP	01-Nov-04	3ORG	2CHLR	trans-Nonachlor	1	VIU,H,SC,VNBC	1.86	ug/kg	0.50	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	COYCRKUP	18-Apr-05	3ORG	2CHLR	trans-Nonachlor	2	H,SC,VNBC	1.55	ug/kg	0.52	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	2CHLR	trans-Nonachlor	1	DNQ H,SC,VNBC	1.88	ug/kg	0.85	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	NAPRIVUP	02-Nov-04	3ORG	2CHLR	trans-Nonachlor	1	DNQ VIU,H,J,SC,VNBC	0.54	ug/kg	0.53	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	NAPRIVUP	19-Apr-05	3ORG	2CHLR	trans-Nonachlor	1	DNQ H,SC,VNBC	0.77	ug/kg	0.54	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	PETRIVLWR	20-Apr-05	3ORG	2CHLR	trans-Nonachlor	1	ND H,VNBC	0.00	ug/kg	1.37	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	PETRIVUP	02-Nov-04	3ORG	2CHLR	trans-Nonachlor	2	DNQ VIU,H,J,SC,VNBC	1.49	ug/kg	0.70	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	PETRIVUP	20-Apr-05	3ORG	2CHLR	trans-Nonachlor	1	DNQ H,SC,VNBC	1.73	ug/kg	0.69	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	2CHLR	trans-Nonachlor	1	H,SC,VNBC	2.21	ug/kg	0.51	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	2CHLR	trans-Nonachlor	1	VIU,H,SC,VNBC	2.17	ug/kg	0.51	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	2CHLR	trans-Nonachlor	1	H,SC,VNBC	7.94	ug/kg	0.66	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	2CHLR	trans-Nonachlor	1	VIU,H,SC,VNBC	4.14	ug/kg	0.91	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	2CHLR	trans-Nonachlor	1	H,SC,VNBC	3.66	ug/kg	1.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	2CHLR	trans-Nonachlor	1	VIU,H,SC,VNBC	13.90	ug/kg	0.55	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	2CHLR	trans-Nonachlor	1	SC,VNBC	6.12	ug/kg	0.71	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_OCH
2005-04	SUICRKLWR	19-Apr-05	3ORG	2CHLR	trans-Nonachlor	1	ND H,SC,VNBC	0.00	ug/kg	0.70	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SUICRKUP	03-Nov-04	3ORG	2CHLR	trans-Nonachlor	1	ND VIU,H,SC,VNBC	0.00	ug/kg	0.59	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SUICRKUP	19-Apr-05	3ORG	2CHLR	trans-Nonachlor	1	ND H,SC,VNBC	0.00	ug/kg	0.52	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH

DDTs

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	COYCRKLWR	18-Apr-05	3ORG	1ADDT	Sum of DDTs (SFEI)	1	X	15.79	ug/kg	1.99	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	COYCRKUP	01-Nov-04	3ORG	1ADDT	Sum of DDTs (SFEI)	1	X	14.69	ug/kg	1.37	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	COYCRKUP	18-Apr-05	3ORG	1ADDT	Sum of DDTs (SFEI)	2	X	11.20	ug/kg	1.41	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	1ADDT	Sum of DDTs (SFEI)	1	X	8.53	ug/kg	2.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	NAPRIVUP	02-Nov-04	3ORG	1ADDT	Sum of DDTs (SFEI)	1	X	11.82	ug/kg	1.46	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	NAPRIVUP	19-Apr-05	3ORG	1ADDT	Sum of DDTs (SFEI)	1	X	7.20	ug/kg	1.47	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	PETRIVLWR	20-Apr-05	3ORG	1ADDT	Sum of DDTs (SFEI)	1	X	3.74	ug/kg	3.78	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	PETRIVUP	02-Nov-04	3ORG	1ADDT	Sum of DDTs (SFEI)	2	X	3.74	ug/kg	1.92	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	PETRIVUP	20-Apr-05	3ORG	1ADDT	Sum of DDTs (SFEI)	1	X	2.29	ug/kg	1.91	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	1ADDT	Sum of DDTs (SFEI)	1	X	4.70	ug/kg	1.39	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	1ADDT	Sum of DDTs (SFEI)	1	X	8.61	ug/kg	1.39	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	1ADDT	Sum of DDTs (SFEI)	1	X	25.95	ug/kg	1.82	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	1ADDT	Sum of DDTs (SFEI)	1	X	13.25	ug/kg	2.50	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	1ADDT	Sum of DDTs (SFEI)	1	X	15.84	ug/kg	3.26	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	1ADDT	Sum of DDTs (SFEI)	1	X	64.23	ug/kg	1.50	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	1ADDT	Sum of DDTs (SFEI)	1	X	36.58	ug/kg	1.96	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_OCH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SUICRKLWR	19-Apr-05	3ORG	1ADDT	Sum of DDTs (SFEI)	1	X	6.22	ug/kg	1.92	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SUICRKUP	03-Nov-04	3ORG	1ADDT	Sum of DDTs (SFEI)	1	X	6.74	ug/kg	1.63	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SUICRKUP	19-Apr-05	3ORG	1ADDT	Sum of DDTs (SFEI)	1	X	8.32	ug/kg	1.44	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	COYCRKLWR	18-Apr-05	3ORG	1DDT	o,p'-DDD	1	DNQ H,SC,VNBC	1.60	ug/kg	1.43	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	COYCRKUP	01-Nov-04	3ORG	1DDT	o,p'-DDD	1	H,SC,VNBC	1.44	ug/kg	0.99	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	COYCRKUP	18-Apr-05	3ORG	1DDT	o,p'-DDD	2	DNQ H,SC,VNBC	1.16	ug/kg	1.02	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	1DDT	o,p'-DDD	1	ND H,SC,VNBC	0.00	ug/kg	1.69	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	NAPRIVUP	02-Nov-04	3ORG	1DDT	o,p'-DDD	1	ND H,SC,VNBC	0.00	ug/kg	1.05	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	NAPRIVUP	19-Apr-05	3ORG	1DDT	o,p'-DDD	1	ND H,SC,VNBC	0.00	ug/kg	1.06	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	PETRIVLWR	20-Apr-05	3ORG	1DDT	o,p'-DDD	1	ND H,SC,VNBC	0.00	ug/kg	2.72	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	PETRIVUP	02-Nov-04	3ORG	1DDT	o,p'-DDD	2	ND H,SC,VNBC	0.00	ug/kg	1.38	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	PETRIVUP	20-Apr-05	3ORG	1DDT	o,p'-DDD	1	ND H,SC,VNBC	0.00	ug/kg	1.37	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	1DDT	o,p'-DDD	1	ND H,SC,VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	1DDT	o,p'-DDD	1	ND H,SC,VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	1DDT	o,p'-DDD	1	H,SC,VNBC	2.78	ug/kg	1.31	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	1DDT	o,p'-DDD	1	ND H,SC,VNBC	0.00	ug/kg	1.80	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	1DDT	o,p'-DDD	1	ND H,SC,VNBC	0.00	ug/kg	2.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	1DDT	o,p'-DDD	1	H,SC,VNBC	3.07	ug/kg	1.08	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	1DDT	o,p'-DDD	1	SC,VNBC	2.48	ug/kg	1.41	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_OCH
2005-04	SUICRKLWR	19-Apr-05	3ORG	1DDT	o,p'-DDD	1	ND H,SC,VNBC	0.00	ug/kg	1.38	DFG-	WPCL_L-211-

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
											WPCL	05_BS375_KR_S_OCH
2004-11	SUICRKUP	03-Nov-04	3ORG	1DDT	o,p'-DDD	1	ND H,SC,VNBC	0.00	ug/kg	1.18	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SUICRKUP	19-Apr-05	3ORG	1DDT	o,p'-DDD	1	ND H,SC,VNBC	0.00	ug/kg	1.03	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	COYCRKLWR	18-Apr-05	3ORG	1DDT	o,p'-DDE	1	ND VIU,H,SC,VNBC	0.00	ug/kg	1.25	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	COYCRKUP	01-Nov-04	3ORG	1DDT	o,p'-DDE	1	ND H,SC,VNBC	0.00	ug/kg	0.86	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	COYCRKUP	18-Apr-05	3ORG	1DDT	o,p'-DDE	2	ND VIU,H,SC,VNBC	0.00	ug/kg	0.89	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	1DDT	o,p'-DDE	1	ND VIU,H,SC,VNBC	0.00	ug/kg	1.48	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	NAPRIVUP	02-Nov-04	3ORG	1DDT	o,p'-DDE	1	ND H,SC,VNBC	0.00	ug/kg	0.92	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	NAPRIVUP	19-Apr-05	3ORG	1DDT	o,p'-DDE	1	ND VIU,H,SC,VNBC	0.00	ug/kg	0.93	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	PETRIVLWR	20-Apr-05	3ORG	1DDT	o,p'-DDE	1	ND VIU,H,VNBC	0.00	ug/kg	2.38	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	PETRIVUP	02-Nov-04	3ORG	1DDT	o,p'-DDE	2	ND H,SC,VNBC	0.00	ug/kg	1.21	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	PETRIVUP	20-Apr-05	3ORG	1DDT	o,p'-DDE	1	ND VIU,H,SC,VNBC	0.00	ug/kg	1.20	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	1DDT	o,p'-DDE	1	ND VIU,H,SC,VNBC	0.00	ug/kg	0.88	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	1DDT	o,p'-DDE	1	ND H,SC,VNBC	0.00	ug/kg	0.88	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	1DDT	o,p'-DDE	1	ND VIU,H,SC,VNBC	0.00	ug/kg	1.15	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	1DDT	o,p'-DDE	1	ND H,SC,VNBC	0.00	ug/kg	1.57	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	1DDT	o,p'-DDE	1	ND VIU,H,SC,VNBC	0.00	ug/kg	2.05	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	1DDT	o,p'-DDE	1	ND H,SC,VNBC	0.00	ug/kg	0.94	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	1DDT	o,p'-DDE	1	ND VIU,SC,VNBC	0.00	ug/kg	1.23	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_OCH
2005-04	SUICRKLWR	19-Apr-05	3ORG	1DDT	o,p'-DDE	1	ND VIU,H,SC,VNBC	0.00	ug/kg	1.21	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	SUICRKUP	03-Nov-04	3ORG	1DDT	o,p'-DDE	1	ND H,SC,VNBC	0.00	ug/kg	1.03	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SUICRKUP	19-Apr-05	3ORG	1DDT	o,p'-DDE	1	ND VIU,H,SC,VNBC	0.00	ug/kg	0.90	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	COYCRKLWR	18-Apr-05	3ORG	1DDT	o,p'-DDT	1	ND H,SC,VNBC	0.00	ug/kg	1.89	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	COYCRKUP	01-Nov-04	3ORG	1DDT	o,p'-DDT	1	ND H,SC,VNBC	0.00	ug/kg	1.30	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	COYCRKUP	18-Apr-05	3ORG	1DDT	o,p'-DDT	2	ND H,SC,VNBC	0.00	ug/kg	1.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	1DDT	o,p'-DDT	1	ND H,SC,VNBC	0.00	ug/kg	2.23	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	NAPRIVUP	02-Nov-04	3ORG	1DDT	o,p'-DDT	1	ND H,SC,VNBC	0.00	ug/kg	1.39	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	NAPRIVUP	19-Apr-05	3ORG	1DDT	o,p'-DDT	1	ND H,SC,VNBC	0.00	ug/kg	1.40	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	PETRIVLWR	20-Apr-05	3ORG	1DDT	o,p'-DDT	1	ND H,VNBC	0.00	ug/kg	3.60	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	PETRIVUP	02-Nov-04	3ORG	1DDT	o,p'-DDT	2	ND H,SC,VNBC	0.00	ug/kg	1.83	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	PETRIVUP	20-Apr-05	3ORG	1DDT	o,p'-DDT	1	ND H,SC,VNBC	0.00	ug/kg	1.81	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	1DDT	o,p'-DDT	1	ND H,SC,VNBC	0.00	ug/kg	1.32	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	1DDT	o,p'-DDT	1	ND H,SC,VNBC	0.00	ug/kg	1.33	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	1DDT	o,p'-DDT	1	ND H,SC,VNBC	0.00	ug/kg	1.73	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	1DDT	o,p'-DDT	1	ND H,SC,VNBC	0.00	ug/kg	2.37	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	1DDT	o,p'-DDT	1	ND H,SC,VNBC	0.00	ug/kg	3.11	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	1DDT	o,p'-DDT	1	H,SC,VNBC	8.06	ug/kg	1.43	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	1DDT	o,p'-DDT	1	ND SC,VNBC	0.00	ug/kg	1.87	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_OCH
2005-04	SUICRKLWR	19-Apr-05	3ORG	1DDT	o,p'-DDT	1	ND H,SC,VNBC	0.00	ug/kg	1.82	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SUICRKUP	03-Nov-04	3ORG	1DDT	o,p'-DDT	1	ND H,SC,VNBC	0.00	ug/kg	1.55	DFG-	WPCL_L-523-537-

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
											WPCL	04_BS347_KR_S_OCH
2005-04	SUICRKUP	19-Apr-05	3ORG	1DDT	o,p'-DDT	1	ND H,SC,VNBC	0.00	ug/kg	1.37	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	COYCRKLWR	18-Apr-05	3ORG	1DDT	p,p'-DDD	1	H,SC,VNBC	4.80	ug/kg	1.68	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	COYCRKUP	01-Nov-04	3ORG	1DDT	p,p'-DDD	1	H,SC,VNBC	4.12	ug/kg	1.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	COYCRKUP	18-Apr-05	3ORG	1DDT	p,p'-DDD	2	H,SC,VNBC	3.43	ug/kg	1.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	1DDT	p,p'-DDD	1	DNQ H,SC,VNBC	2.05	ug/kg	1.98	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	NAPRIVUP	02-Nov-04	3ORG	1DDT	p,p'-DDD	1	H,SC,VNBC	4.09	ug/kg	1.24	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	NAPRIVUP	19-Apr-05	3ORG	1DDT	p,p'-DDD	1	H,SC,VNBC	2.22	ug/kg	1.24	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	PETRIVLWR	20-Apr-05	3ORG	1DDT	p,p'-DDD	1	ND H,SC,VNBC	0.00	ug/kg	3.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	PETRIVUP	02-Nov-04	3ORG	1DDT	p,p'-DDD	2	ND H,SC,VNBC	1.08	ug/kg	1.62	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	PETRIVUP	20-Apr-05	3ORG	1DDT	p,p'-DDD	1	ND H,SC,VNBC	0.00	ug/kg	1.61	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	1DDT	p,p'-DDD	1	H,SC,VNBC	1.39	ug/kg	1.17	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	1DDT	p,p'-DDD	1	H,SC,VNBC	2.45	ug/kg	1.17	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	1DDT	p,p'-DDD	1	H,SC,VNBC	8.47	ug/kg	1.53	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	1DDT	p,p'-DDD	1	H,SC,VNBC	4.92	ug/kg	2.10	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	1DDT	p,p'-DDD	1	H,SC,VNBC	4.14	ug/kg	2.75	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	1DDT	p,p'-DDD	1	H,SC,VNBC	11.70	ug/kg	1.26	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	1DDT	p,p'-DDD	1	SC,VNBC	11.10	ug/kg	1.65	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_OCH
2005-04	SUICRKLWR	19-Apr-05	3ORG	1DDT	p,p'-DDD	1	H,SC,VNBC	1.99	ug/kg	1.62	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SUICRKUP	03-Nov-04	3ORG	1DDT	p,p'-DDD	1	ND H,SC,VNBC	0.00	ug/kg	1.38	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SUICRKUP	19-Apr-05	3ORG	1DDT	p,p'-DDD	1	H,SC,VNBC	2.06	ug/kg	1.21	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	COYCRKLWR	18-Apr-05	3ORG	1DDT	p,p'-DDE	1	H,SC,VNBC	9.39	ug/kg	1.07	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	COYCRKUP	01-Nov-04	3ORG	1DDT	p,p'-DDE	1	H,SC,VNBC	9.13	ug/kg	0.74	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	COYCRKUP	18-Apr-05	3ORG	1DDT	p,p'-DDE	2	H,SC,VNBC	6.62	ug/kg	0.76	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	1DDT	p,p'-DDE	1	H,SC,VNBC	6.48	ug/kg	1.26	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	NAPRIVUP	02-Nov-04	3ORG	1DDT	p,p'-DDE	1	H,SC,VNBC	7.73	ug/kg	0.79	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	NAPRIVUP	19-Apr-05	3ORG	1DDT	p,p'-DDE	1	H,SC,VNBC	4.98	ug/kg	0.80	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	PETRIVLWR	20-Apr-05	3ORG	1DDT	p,p'-DDE	1	DNQ H,VNBC	3.74	ug/kg	2.04	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	PETRIVUP	02-Nov-04	3ORG	1DDT	p,p'-DDE	2	DNQ H,J,SC,VNBC	2.66	ug/kg	1.04	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	PETRIVUP	20-Apr-05	3ORG	1DDT	p,p'-DDE	1	DNQ H,SC,VNBC	2.29	ug/kg	1.03	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	1DDT	p,p'-DDE	1	H,SC,VNBC	3.31	ug/kg	0.75	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	1DDT	p,p'-DDE	1	H,SC,VNBC	6.16	ug/kg	0.75	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	1DDT	p,p'-DDE	1	H,SC,VNBC	14.70	ug/kg	0.98	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	1DDT	p,p'-DDE	1	H,SC,VNBC	8.33	ug/kg	1.35	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	1DDT	p,p'-DDE	1	H,SC,VNBC	11.70	ug/kg	1.76	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	1DDT	p,p'-DDE	1	H,SC,VNBC	41.40	ug/kg	0.81	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	1DDT	p,p'-DDE	1	SC,VNBC	23.00	ug/kg	1.06	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_OCH
2005-04	SUICRKLWR	19-Apr-05	3ORG	1DDT	p,p'-DDE	1	H,SC,VNBC	4.23	ug/kg	1.03	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SUICRKUP	03-Nov-04	3ORG	1DDT	p,p'-DDE	1	H,SC,VNBC	6.74	ug/kg	0.88	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SUICRKUP	19-Apr-05	3ORG	1DDT	p,p'-DDE	1	H,SC,VNBC	6.26	ug/kg	0.78	DFG-	WPCL_L-211-

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
											WPCL	05_BS375_KR_S_OCH
2005-04	COYCRKLWR	18-Apr-05	3ORG	1DDT	p,p'-DDT	1	DNQ VRIU,H,SC,VNBC		ug/kg	4.61	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	COYCRKUP	01-Nov-04	3ORG	1DDT	p,p'-DDT	1	DNQ VRIU,H,J,SC,VNBC		ug/kg	3.17	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	COYCRKUP	18-Apr-05	3ORG	1DDT	p,p'-DDT	2	DNQ VRIU,H,SC,VNBC		ug/kg	3.27	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	1DDT	p,p'-DDT	1	ND VRIU,H,SC,VNBC		ug/kg	5.43	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	NAPRIVUP	02-Nov-04	3ORG	1DDT	p,p'-DDT	1	VRIU,H,SC,VNBC		ug/kg	3.39	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	NAPRIVUP	19-Apr-05	3ORG	1DDT	p,p'-DDT	1	ND VRIU,H,SC,VNBC		ug/kg	3.41	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	PETRIVLWR	20-Apr-05	3ORG	1DDT	p,p'-DDT	1	ND VRIU,H,VNBC		ug/kg	8.76	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	PETRIVUP	02-Nov-04	3ORG	1DDT	p,p'-DDT	2	ND VRIU,H,SC,VNBC		ug/kg	4.46	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	PETRIVUP	20-Apr-05	3ORG	1DDT	p,p'-DDT	1	ND VRIU,H,SC,VNBC		ug/kg	4.41	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	1DDT	p,p'-DDT	1	DNQ VRIU,H,SC,VNBC		ug/kg	3.22	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	1DDT	p,p'-DDT	1	DNQ VRIU,H,J,SC,VNBC		ug/kg	3.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	1DDT	p,p'-DDT	1	VRIU,H,SC,VNBC		ug/kg	4.21	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	1DDT	p,p'-DDT	1	DNQ VRIU,H,J,SC,VNBC		ug/kg	5.78	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	1DDT	p,p'-DDT	1	ND VRIU,H,SC,VNBC		ug/kg	7.56	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	1DDT	p,p'-DDT	1	VRIU,H,SC,VNBC		ug/kg	3.47	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	1DDT	p,p'-DDT	1	ND VRIU,SC,VNBC		ug/kg	4.54	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_OCH
2005-04	SUICRKLWR	19-Apr-05	3ORG	1DDT	p,p'-DDT	1	ND VRIU,H,SC,VNBC		ug/kg	4.44	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SUICRKUP	03-Nov-04	3ORG	1DDT	p,p'-DDT	1	ND VRIU,H,SC,VNBC		ug/kg	3.78	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SUICRKUP	19-Apr-05	3ORG	1DDT	p,p'-DDT	1	DNQ VRIU,H,SC,VNBC		ug/kg	3.32	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH

HCHs (hexachlorocyclohexanes)

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	COYCRKLWR	18-Apr-05	3ORG	3HCH	alpha-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.89	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	COYCRKUP	01-Nov-04	3ORG	3HCH	alpha-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.61	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	COYCRKUP	18-Apr-05	3ORG	3HCH	alpha-HCH	2	ND H,SC,VNBC	0.00	ug/kg	0.63	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	3HCH	alpha-HCH	1	ND H,SC,VNBC	0.00	ug/kg	1.04	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	NAPRIVUP	02-Nov-04	3ORG	3HCH	alpha-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.65	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	NAPRIVUP	19-Apr-05	3ORG	3HCH	alpha-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.66	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	PETRIVLWR	20-Apr-05	3ORG	3HCH	alpha-HCH	1	ND H,SC,VNBC	0.00	ug/kg	1.69	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	PETRIVUP	02-Nov-04	3ORG	3HCH	alpha-HCH	2	ND H,SC,VNBC	0.00	ug/kg	0.86	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	PETRIVUP	20-Apr-05	3ORG	3HCH	alpha-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.85	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	3HCH	alpha-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.62	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	3HCH	alpha-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.62	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	3HCH	alpha-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.81	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	3HCH	alpha-HCH	1	ND H,SC,VNBC	0.00	ug/kg	1.11	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	3HCH	alpha-HCH	1	ND H,SC,VNBC	0.00	ug/kg	1.46	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	3HCH	alpha-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.67	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	3HCH	alpha-HCH	1	ND SC,VNBC	0.00	ug/kg	0.88	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_OCH
2005-04	SUICRKLWR	19-Apr-05	3ORG	3HCH	alpha-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.85	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SUICRKUP	03-Nov-04	3ORG	3HCH	alpha-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.73	DFG-	WPCL_L-523-537-

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
											WPCL	04_BS347_KR_S_OCH
2005-04	SUICRKUP	19-Apr-05	3ORG	3HCH	alpha-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.64	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	COYCRKLWR	18-Apr-05	3ORG	3HCH	beta-HCH	1	ND H,SC,VNBC	0.00	ug/kg	1.15	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	COYCRKUP	01-Nov-04	3ORG	3HCH	beta-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.79	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	COYCRKUP	18-Apr-05	3ORG	3HCH	beta-HCH	2	ND H,SC,VNBC	0.00	ug/kg	0.82	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	3HCH	beta-HCH	1	ND H,SC,VNBC	0.00	ug/kg	1.35	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	NAPRIVUP	02-Nov-04	3ORG	3HCH	beta-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.85	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	NAPRIVUP	19-Apr-05	3ORG	3HCH	beta-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.85	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	PETRIVLWR	20-Apr-05	3ORG	3HCH	beta-HCH	1	ND H,SC,VNBC	0.00	ug/kg	2.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	PETRIVUP	02-Nov-04	3ORG	3HCH	beta-HCH	2	ND H,SC,VNBC	0.00	ug/kg	1.11	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	PETRIVUP	20-Apr-05	3ORG	3HCH	beta-HCH	1	ND H,SC,VNBC	0.00	ug/kg	1.10	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	3HCH	beta-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.80	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	3HCH	beta-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.80	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	3HCH	beta-HCH	1	ND H,SC,VNBC	0.00	ug/kg	1.05	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	3HCH	beta-HCH	1	ND H,SC,VNBC	0.00	ug/kg	1.44	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	3HCH	beta-HCH	1	ND H,SC,VNBC	0.00	ug/kg	1.88	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	3HCH	beta-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.87	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	3HCH	beta-HCH	1	ND SC,VNBC	0.00	ug/kg	1.13	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_OCH
2005-04	SUICRKLWR	19-Apr-05	3ORG	3HCH	beta-HCH	1	ND H,SC,VNBC	0.00	ug/kg	1.11	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SUICRKUP	03-Nov-04	3ORG	3HCH	beta-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.94	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SUICRKUP	19-Apr-05	3ORG	3HCH	beta-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.83	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	COYCRKLWR	18-Apr-05	3ORG	3HCH	delta-HCH	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	0.67	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	COYCRKUP	01-Nov-04	3ORG	3HCH	delta-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.46	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	COYCRKUP	18-Apr-05	3ORG	3HCH	delta-HCH	2	ND VRIU,H,SC,VNBC	0.00	ug/kg	0.48	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	3HCH	delta-HCH	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	0.79	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	NAPRIVUP	02-Nov-04	3ORG	3HCH	delta-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.49	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	NAPRIVUP	19-Apr-05	3ORG	3HCH	delta-HCH	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	0.50	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	PETRIVLWR	20-Apr-05	3ORG	3HCH	delta-HCH	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	1.28	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	PETRIVUP	02-Nov-04	3ORG	3HCH	delta-HCH	2	ND H,SC,VNBC	0.00	ug/kg	0.65	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	PETRIVUP	20-Apr-05	3ORG	3HCH	delta-HCH	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	0.64	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	3HCH	delta-HCH	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	0.47	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	3HCH	delta-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.47	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	3HCH	delta-HCH	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	0.61	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	3HCH	delta-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.84	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	3HCH	delta-HCH	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	1.10	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	3HCH	delta-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.51	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	3HCH	delta-HCH	1	ND VRIU,SC,VNBC	0.00	ug/kg	0.66	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_OCH
2005-04	SUICRKLWR	19-Apr-05	3ORG	3HCH	delta-HCH	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	0.65	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SUICRKUP	03-Nov-04	3ORG	3HCH	delta-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.55	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SUICRKUP	19-Apr-05	3ORG	3HCH	delta-HCH	1	ND VRIU,H,SC,VNBC	0.00	ug/kg	0.48	DFG-	WPCL_L-211-

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
											WPCL	05_BS375_KR_S_OCH
2005-04	COYCRKLWR	18-Apr-05	3ORG	3HCH	gamma-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.63	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	COYCRKUP	01-Nov-04	3ORG	3HCH	gamma-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.44	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	COYCRKUP	18-Apr-05	3ORG	3HCH	gamma-HCH	2	ND H,SC,VNBC	0.00	ug/kg	0.45	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	3HCH	gamma-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.75	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	NAPRIVUP	02-Nov-04	3ORG	3HCH	gamma-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.47	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	NAPRIVUP	19-Apr-05	3ORG	3HCH	gamma-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.47	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	PETRIVLWR	20-Apr-05	3ORG	3HCH	gamma-HCH	1	ND H,SC,VNBC	0.00	ug/kg	1.20	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	PETRIVUP	02-Nov-04	3ORG	3HCH	gamma-HCH	2	ND H,SC,VNBC	0.00	ug/kg	0.61	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	PETRIVUP	20-Apr-05	3ORG	3HCH	gamma-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.61	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	3HCH	gamma-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.44	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	3HCH	gamma-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.44	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	3HCH	gamma-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.58	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	3HCH	gamma-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.80	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	3HCH	gamma-HCH	1	ND H,SC,VNBC	0.00	ug/kg	1.04	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	3HCH	gamma-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.48	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	3HCH	gamma-HCH	1	ND SC,VNBC	0.00	ug/kg	0.63	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_OCH
2005-04	SUICRKLWR	19-Apr-05	3ORG	3HCH	gamma-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.61	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SUICRKUP	03-Nov-04	3ORG	3HCH	gamma-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.52	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SUICRKUP	19-Apr-05	3ORG	3HCH	gamma-HCH	1	ND H,SC,VNBC	0.00	ug/kg	0.46	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	COYCRKLWR	18-Apr-05	3ORG	3HCH	Sum of HCHs (SFEI)	1	X	0.00	ug/kg	0.84	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	COYCRKUP	01-Nov-04	3ORG	3HCH	Sum of HCHs (SFEI)	1	X	0.00	ug/kg	0.57	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	COYCRKUP	18-Apr-05	3ORG	3HCH	Sum of HCHs (SFEI)	2	X	0.00	ug/kg	0.59	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	3HCH	Sum of HCHs (SFEI)	1	X	0.00	ug/kg	0.98	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	NAPRIVUP	02-Nov-04	3ORG	3HCH	Sum of HCHs (SFEI)	1	X	0.00	ug/kg	0.61	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	NAPRIVUP	19-Apr-05	3ORG	3HCH	Sum of HCHs (SFEI)	1	X	0.00	ug/kg	0.62	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	PETRIVLWR	20-Apr-05	3ORG	3HCH	Sum of HCHs (SFEI)	1	X	0.00	ug/kg	1.59	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	PETRIVUP	02-Nov-04	3ORG	3HCH	Sum of HCHs (SFEI)	2	X	0.00	ug/kg	0.81	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	PETRIVUP	20-Apr-05	3ORG	3HCH	Sum of HCHs (SFEI)	1	X	0.00	ug/kg	0.80	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	3HCH	Sum of HCHs (SFEI)	1	X	0.00	ug/kg	0.58	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	3HCH	Sum of HCHs (SFEI)	1	X	0.00	ug/kg	0.58	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	3HCH	Sum of HCHs (SFEI)	1	X	0.00	ug/kg	0.76	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	3HCH	Sum of HCHs (SFEI)	1	X	0.00	ug/kg	1.05	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	3HCH	Sum of HCHs (SFEI)	1	X	0.00	ug/kg	1.37	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	3HCH	Sum of HCHs (SFEI)	1	X	0.00	ug/kg	0.63	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	3HCH	Sum of HCHs (SFEI)	1	X	0.00	ug/kg	0.82	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_OCH
2005-04	SUICRKLWR	19-Apr-05	3ORG	3HCH	Sum of HCHs (SFEI)	1	X	0.00	ug/kg	0.81	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SUICRKUP	03-Nov-04	3ORG	3HCH	Sum of HCHs (SFEI)	1	X	0.00	ug/kg	0.69	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SUICRKUP	19-Apr-05	3ORG	3HCH	Sum of HCHs (SFEI)	1	X	0.00	ug/kg	0.60	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH

Other Synthetic Biocides

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	COYCRKLWR	18-Apr-05	3ORG	5Other	Hexachlorobenzene	1	ND H,SC,VNBC	0.00	ug/kg	0.20	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	COYCRKUP	01-Nov-04	3ORG	5Other	Hexachlorobenzene	1	DNQ H,J,SC,VNBC	0.17	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	COYCRKUP	18-Apr-05	3ORG	5Other	Hexachlorobenzene	2	ND H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	5Other	Hexachlorobenzene	1	ND H,SC,VNBC	0.00	ug/kg	0.24	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	NAPRIVUP	02-Nov-04	3ORG	5Other	Hexachlorobenzene	1	ND H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	NAPRIVUP	19-Apr-05	3ORG	5Other	Hexachlorobenzene	1	ND H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	PETRIVLWR	20-Apr-05	3ORG	5Other	Hexachlorobenzene	1	ND H,VNBC	0.00	ug/kg	0.38	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	PETRIVUP	02-Nov-04	3ORG	5Other	Hexachlorobenzene	2	ND H,SC,VNBC	0.00	ug/kg	0.19	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	PETRIVUP	20-Apr-05	3ORG	5Other	Hexachlorobenzene	1	ND H,SC,VNBC	0.00	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	5Other	Hexachlorobenzene	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	5Other	Hexachlorobenzene	1	ND H,SC,VNBC	0.00	ug/kg	0.14	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	5Other	Hexachlorobenzene	1	H,SC,VNBC	1.06	ug/kg	0.18	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	5Other	Hexachlorobenzene	1	ND H,SC,VNBC	0.00	ug/kg	0.25	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	5Other	Hexachlorobenzene	1	ND H,SC,VNBC	0.00	ug/kg	0.33	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	5Other	Hexachlorobenzene	1	DNQ H,J,SC,VNBC	0.17	ug/kg	0.15	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	5Other	Hexachlorobenzene	1	ND SC,VNBC	0.00	ug/kg	0.20	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_OCH
2005-04	SUICRKLWR	19-Apr-05	3ORG	5Other	Hexachlorobenzene	1	ND H,SC,VNBC	0.00	ug/kg	0.19	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SUICRKUP	03-Nov-04	3ORG	5Other	Hexachlorobenzene	1	ND H,SC,VNBC	0.00	ug/kg	0.17	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SUICRKUP	19-Apr-05	3ORG	5Other	Hexachlorobenzene	1	ND H,SC,VNBC	0.00	ug/kg	0.15	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	COYCRKLWR	18-Apr-05	3ORG	5Other	Mirex	1	ND H,SC,VNBC	0.00	ug/kg	1.76	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	COYCRKUP	01-Nov-04	3ORG	5Other	Mirex	1	ND H,SC,VNBC	0.00	ug/kg	1.21	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	COYCRKUP	18-Apr-05	3ORG	5Other	Mirex	2	ND H,SC,VNBC	0.00	ug/kg	1.25	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	NAPRIVLWR	19-Apr-05	3ORG	5Other	Mirex	1	ND H,SC,VNBC	0.00	ug/kg	2.07	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	NAPRIVUP	02-Nov-04	3ORG	5Other	Mirex	1	ND H,SC,VNBC	0.00	ug/kg	1.30	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	NAPRIVUP	19-Apr-05	3ORG	5Other	Mirex	1	ND H,SC,VNBC	0.00	ug/kg	1.30	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	PETRIVLWR	20-Apr-05	3ORG	5Other	Mirex	1	ND H,SC,VNBC	0.00	ug/kg	3.34	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	PETRIVUP	02-Nov-04	3ORG	5Other	Mirex	2	ND H,SC,VNBC	0.00	ug/kg	1.70	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	PETRIVUP	20-Apr-05	3ORG	5Other	Mirex	1	ND H,SC,VNBC	0.00	ug/kg	1.69	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	5Other	Mirex	1	ND H,SC,VNBC	0.00	ug/kg	1.23	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANLORCRKUP	03-Nov-04	3ORG	5Other	Mirex	1	ND H,SC,VNBC	0.00	ug/kg	1.23	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANLORCRKUP	20-Apr-05	3ORG	5Other	Mirex	1	ND H,SC,VNBC	0.00	ug/kg	1.61	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	5Other	Mirex	1	ND H,SC,VNBC	0.00	ug/kg	2.21	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	5Other	Mirex	1	ND H,SC,VNBC	0.00	ug/kg	2.89	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SANMATCRKUP	04-Nov-04	3ORG	5Other	Mirex	1	ND H,SC,VNBC	0.00	ug/kg	1.33	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SANMATCRKUP	18-Apr-05	3ORG	5Other	Mirex	1	ND SC,VNBC	0.00	ug/kg	1.73	DFG-WPCL	WPCL_L-192-05_BS373_KR_S_OCH
2005-04	SUICRKLWR	19-Apr-05	3ORG	5Other	Mirex	1	ND H,SC,VNBC	0.00	ug/kg	1.69	DFG-WPCL	WPCL_L-211-05_BS375_KR_S_OCH
2004-11	SUICRKUP	03-Nov-04	3ORG	5Other	Mirex	1	ND H,SC,VNBC	0.00	ug/kg	1.44	DFG-WPCL	WPCL_L-523-537-04_BS347_KR_S_OCH
2005-04	SUICRKUP	19-Apr-05	3ORG	5Other	Mirex	1	ND H,SC,VNBC	0.00	ug/kg	1.27	DFG-	WPCL_L-211-

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
											WPCL	05_BS375_KR_S_OCH

Pyrethroids
The individual pyrethroid compounds were analyzed as separate isomers with the exception of bifenthrin. The AnalyteGrp2: 6PYRETH is the sum of the individual isomers for each pyrethroid compound.

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	COYCRKLWR	18-Apr-05	3ORG	61PYRETH	Sum of Pyrethroids (SFEI)	1	X	2.03	ug/kg	1.67	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	COYCRKUP	01-Nov-04	3ORG	61PYRETH	Sum of Pyrethroids (SFEI)	1	X	1.90	ug/kg	1.67	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	COYCRKUP	18-Apr-05	3ORG	61PYRETH	Sum of Pyrethroids (SFEI)	2	X	0.66	ug/kg	1.67	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	NAPRIVLWR	19-Apr-05	3ORG	61PYRETH	Sum of Pyrethroids (SFEI)	1	X	1.07	ug/kg	1.67	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	NAPRIVUP	02-Nov-04	3ORG	61PYRETH	Sum of Pyrethroids (SFEI)	2	X	2.00	ug/kg	1.67	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	NAPRIVUP	19-Apr-05	3ORG	61PYRETH	Sum of Pyrethroids (SFEI)	1	X	0.00	ug/kg	1.67	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	PETRIVLWR	20-Apr-05	3ORG	61PYRETH	Sum of Pyrethroids (SFEI)	1	X	0.00	ug/kg	1.67	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	PETRIVUP	02-Nov-04	3ORG	61PYRETH	Sum of Pyrethroids (SFEI)	1	X	6.69	ug/kg	1.67	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	PETRIVUP	20-Apr-05	3ORG	61PYRETH	Sum of Pyrethroids (SFEI)	1	X	0.00	ug/kg	1.67	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	61PYRETH	Sum of Pyrethroids (SFEI)	1	X	0.00	ug/kg	1.67	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANLORCRKUP	03-Nov-04	3ORG	61PYRETH	Sum of Pyrethroids (SFEI)	1	X	8.17	ug/kg	1.67	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANLORCRKUP	20-Apr-05	3ORG	61PYRETH	Sum of Pyrethroids (SFEI)	1	X	2.05	ug/kg	1.67	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	61PYRETH	Sum of Pyrethroids (SFEI)	1	X	9.96	ug/kg	1.67	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	61PYRETH	Sum of Pyrethroids (SFEI)	1	X	2.38	ug/kg	1.67	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKUP	04-Nov-04	3ORG	61PYRETH	Sum of Pyrethroids (SFEI)	1	X	43.55	ug/kg	1.67	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKUP	18-Apr-05	3ORG	61PYRETH	Sum of Pyrethroids (SFEI)	1	X	0.00	ug/kg	1.67	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SUICRKLWR	19-Apr-05	3ORG	61PYRETH	Sum of Pyrethroids (SFEI)	1	X	0.00	ug/kg	1.67	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SUICRKUP	03-Nov-04	3ORG	61PYRETH	Sum of Pyrethroids (SFEI)	1	X	6.76	ug/kg	1.67	DFG-	WPCL_L-523-537-04_S_PYD-PYN

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
											WPCL	
2005-04	SUICRKUP	19-Apr-05	3ORG	61PYRETH	Sum of Pyrethroids (SFEI)	1	X	0.00	ug/kg	1.67	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	COYCRKLWR	18-Apr-05	3ORG	6PYRETH	Bifenthrin	1	VNBC	2.03	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	COYCRKUP	01-Nov-04	3ORG	6PYRETH	Bifenthrin	1	DNQ J,VNBC	1.90	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	COYCRKUP	18-Apr-05	3ORG	6PYRETH	Bifenthrin	2	DNQ VNBC	0.66	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	NAPRIVLWR	19-Apr-05	3ORG	6PYRETH	Bifenthrin	1	DNQ VNBC	1.07	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	NAPRIVUP	02-Nov-04	3ORG	6PYRETH	Bifenthrin	2	VNBC	2.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	NAPRIVUP	19-Apr-05	3ORG	6PYRETH	Bifenthrin	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	PETRIVLWR	20-Apr-05	3ORG	6PYRETH	Bifenthrin	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	PETRIVUP	02-Nov-04	3ORG	6PYRETH	Bifenthrin	1	VNBC	6.69	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	PETRIVUP	20-Apr-05	3ORG	6PYRETH	Bifenthrin	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	6PYRETH	Bifenthrin	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANLORCRKUP	03-Nov-04	3ORG	6PYRETH	Bifenthrin	1	VNBC	4.40	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANLORCRKUP	20-Apr-05	3ORG	6PYRETH	Bifenthrin	1	VNBC	2.05	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	6PYRETH	Bifenthrin	1	VNBC	6.74	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	6PYRETH	Bifenthrin	1	VNBC	2.38	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKUP	04-Nov-04	3ORG	6PYRETH	Bifenthrin	1	VNBC	10.30	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKUP	18-Apr-05	3ORG	6PYRETH	Bifenthrin	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SUICRKLWR	19-Apr-05	3ORG	6PYRETH	Bifenthrin	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SUICRKUP	03-Nov-04	3ORG	6PYRETH	Bifenthrin	1	VNBC	3.55	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	SUICRKUP	19-Apr-05	3ORG	6PYRETH	Bifenthrin	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	COYCRKLWR	18-Apr-05	3ORG	6PYRETH	Cyfluthrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	COYCRKUP	01-Nov-04	3ORG	6PYRETH	Cyfluthrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	COYCRKUP	18-Apr-05	3ORG	6PYRETH	Cyfluthrin	2	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	NAPRIVLWR	19-Apr-05	3ORG	6PYRETH	Cyfluthrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	NAPRIVUP	02-Nov-04	3ORG	6PYRETH	Cyfluthrin	2	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	NAPRIVUP	19-Apr-05	3ORG	6PYRETH	Cyfluthrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	PETRIVLWR	20-Apr-05	3ORG	6PYRETH	Cyfluthrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	PETRIVUP	02-Nov-04	3ORG	6PYRETH	Cyfluthrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	PETRIVUP	20-Apr-05	3ORG	6PYRETH	Cyfluthrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	6PYRETH	Cyfluthrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANLORCRKUP	03-Nov-04	3ORG	6PYRETH	Cyfluthrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANLORCRKUP	20-Apr-05	3ORG	6PYRETH	Cyfluthrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	6PYRETH	Cyfluthrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	6PYRETH	Cyfluthrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKUP	04-Nov-04	3ORG	6PYRETH	Cyfluthrin	1	X	8.62	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKUP	18-Apr-05	3ORG	6PYRETH	Cyfluthrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SUICRKLWR	19-Apr-05	3ORG	6PYRETH	Cyfluthrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SUICRKUP	03-Nov-04	3ORG	6PYRETH	Cyfluthrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SUICRKUP	19-Apr-05	3ORG	6PYRETH	Cyfluthrin	1	ND X	0.00	ug/kg	2.00	DFG-	WPCL_L-211-05_S_PYD-PYN

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
											WPCL	
2005-04	COYCRKLWR	18-Apr-05	3ORG	6PYRETH	Cypermethrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	COYCRKUP	01-Nov-04	3ORG	6PYRETH	Cypermethrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	COYCRKUP	18-Apr-05	3ORG	6PYRETH	Cypermethrin	2	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	NAPRIVLWR	19-Apr-05	3ORG	6PYRETH	Cypermethrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	NAPRIVUP	02-Nov-04	3ORG	6PYRETH	Cypermethrin	2	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	NAPRIVUP	19-Apr-05	3ORG	6PYRETH	Cypermethrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	PETRIVLWR	20-Apr-05	3ORG	6PYRETH	Cypermethrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	PETRIVUP	02-Nov-04	3ORG	6PYRETH	Cypermethrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	PETRIVUP	20-Apr-05	3ORG	6PYRETH	Cypermethrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	6PYRETH	Cypermethrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANLORCRKUP	03-Nov-04	3ORG	6PYRETH	Cypermethrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANLORCRKUP	20-Apr-05	3ORG	6PYRETH	Cypermethrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	6PYRETH	Cypermethrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	6PYRETH	Cypermethrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKUP	04-Nov-04	3ORG	6PYRETH	Cypermethrin	1	X	4.17	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKUP	18-Apr-05	3ORG	6PYRETH	Cypermethrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SUICRKLWR	19-Apr-05	3ORG	6PYRETH	Cypermethrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SUICRKUP	03-Nov-04	3ORG	6PYRETH	Cypermethrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SUICRKUP	19-Apr-05	3ORG	6PYRETH	Cypermethrin	1	ND X	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	COYCRKLWR	18-Apr-05	3ORG	6PYRETH	Esfenvalerate	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	COYCRKUP	01-Nov-04	3ORG	6PYRETH	Esfenvalerate	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	COYCRKUP	18-Apr-05	3ORG	6PYRETH	Esfenvalerate	2	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	NAPRIVLWR	19-Apr-05	3ORG	6PYRETH	Esfenvalerate	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	NAPRIVUP	02-Nov-04	3ORG	6PYRETH	Esfenvalerate	2	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	NAPRIVUP	19-Apr-05	3ORG	6PYRETH	Esfenvalerate	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	PETRIVLWR	20-Apr-05	3ORG	6PYRETH	Esfenvalerate	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	PETRIVUP	02-Nov-04	3ORG	6PYRETH	Esfenvalerate	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	PETRIVUP	20-Apr-05	3ORG	6PYRETH	Esfenvalerate	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	6PYRETH	Esfenvalerate	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANLORCRKUP	03-Nov-04	3ORG	6PYRETH	Esfenvalerate	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANLORCRKUP	20-Apr-05	3ORG	6PYRETH	Esfenvalerate	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	6PYRETH	Esfenvalerate	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	6PYRETH	Esfenvalerate	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKUP	04-Nov-04	3ORG	6PYRETH	Esfenvalerate	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKUP	18-Apr-05	3ORG	6PYRETH	Esfenvalerate	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SUICRKLWR	19-Apr-05	3ORG	6PYRETH	Esfenvalerate	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SUICRKUP	03-Nov-04	3ORG	6PYRETH	Esfenvalerate	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SUICRKUP	19-Apr-05	3ORG	6PYRETH	Esfenvalerate	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	COYCRKLWR	18-Apr-05	3ORG	6PYRETH	Lambda-cyhalothrin	1	ND X	0.00	ug/kg	1.00	DFG-	WPCL_L-211-05_S_PYD-PYN

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
											WPCL	
2004-11	COYCRKUP	01-Nov-04	3ORG	6PYRETH	Lambda-cyhalothrin	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	COYCRKUP	18-Apr-05	3ORG	6PYRETH	Lambda-cyhalothrin	2	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	NAPRIVLWR	19-Apr-05	3ORG	6PYRETH	Lambda-cyhalothrin	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	NAPRIVUP	02-Nov-04	3ORG	6PYRETH	Lambda-cyhalothrin	2	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	NAPRIVUP	19-Apr-05	3ORG	6PYRETH	Lambda-cyhalothrin	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	PETRIVLWR	20-Apr-05	3ORG	6PYRETH	Lambda-cyhalothrin	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	PETRIVUP	02-Nov-04	3ORG	6PYRETH	Lambda-cyhalothrin	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	PETRIVUP	20-Apr-05	3ORG	6PYRETH	Lambda-cyhalothrin	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	6PYRETH	Lambda-cyhalothrin	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANLORCRKUP	03-Nov-04	3ORG	6PYRETH	Lambda-cyhalothrin	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANLORCRKUP	20-Apr-05	3ORG	6PYRETH	Lambda-cyhalothrin	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	6PYRETH	Lambda-cyhalothrin	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	6PYRETH	Lambda-cyhalothrin	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKUP	04-Nov-04	3ORG	6PYRETH	Lambda-cyhalothrin	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKUP	18-Apr-05	3ORG	6PYRETH	Lambda-cyhalothrin	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SUICRKLWR	19-Apr-05	3ORG	6PYRETH	Lambda-cyhalothrin	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SUICRKUP	03-Nov-04	3ORG	6PYRETH	Lambda-cyhalothrin	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SUICRKUP	19-Apr-05	3ORG	6PYRETH	Lambda-cyhalothrin	1	ND X	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	COYCRKLWR	18-Apr-05	3ORG	6PYRETH	Permethrin	1	ND X	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	COYCRKUP	01-Nov-04	3ORG	6PYRETH	Permethrin	1	ND X	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	COYCRKUP	18-Apr-05	3ORG	6PYRETH	Permethrin	2	ND X	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	NAPRIVLWR	19-Apr-05	3ORG	6PYRETH	Permethrin	1	ND X	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	NAPRIVUP	02-Nov-04	3ORG	6PYRETH	Permethrin	2	ND X	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	NAPRIVUP	19-Apr-05	3ORG	6PYRETH	Permethrin	1	ND X	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	PETRIVLWR	20-Apr-05	3ORG	6PYRETH	Permethrin	1	ND X	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	PETRIVUP	02-Nov-04	3ORG	6PYRETH	Permethrin	1	ND X	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	PETRIVUP	20-Apr-05	3ORG	6PYRETH	Permethrin	1	ND X	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	6PYRETH	Permethrin	1	ND X	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANLORCRKUP	03-Nov-04	3ORG	6PYRETH	Permethrin	1	X	3.77	ug/kg	3.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANLORCRKUP	20-Apr-05	3ORG	6PYRETH	Permethrin	1	ND X	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	6PYRETH	Permethrin	1	X	3.22	ug/kg	3.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	6PYRETH	Permethrin	1	ND X	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKUP	04-Nov-04	3ORG	6PYRETH	Permethrin	1	X	20.46	ug/kg	3.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKUP	18-Apr-05	3ORG	6PYRETH	Permethrin	1	ND X	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SUICRKLWR	19-Apr-05	3ORG	6PYRETH	Permethrin	1	ND X	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SUICRKUP	03-Nov-04	3ORG	6PYRETH	Permethrin	1	X	3.21	ug/kg	3.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SUICRKUP	19-Apr-05	3ORG	6PYRETH	Permethrin	1	ND X	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	COYCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	COYCRKUP	01-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-	WPCL_L-523-537-04_S_PYD-PYN

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
											WPCL	
2005-04	COYCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-1)	2	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	NAPRIVLWR	19-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	NAPRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-1)	2	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	NAPRIVUP	19-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	PETRIVLWR	20-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	PETRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	PETRIVUP	20-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANLORCRKUP	03-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANLORCRKUP	20-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKUP	04-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-1)	1	DNQ J,VNBC	2.65	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SUICRKLWR	19-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SUICRKUP	03-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SUICRKUP	19-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	COYCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	COYCRKUP	01-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	COYCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-2)	2	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	NAPRIVLWR	19-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	NAPRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-2)	2	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	NAPRIVUP	19-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	PETRIVLWR	20-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	PETRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	PETRIVUP	20-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANLORCRKUP	03-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANLORCRKUP	20-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKUP	04-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-2)	1	DNQ J,VNBC	2.91	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SUICRKLWR	19-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SUICRKUP	03-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SUICRKUP	19-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	COYCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	COYCRKUP	01-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	COYCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-3)	2	ND VNBC	0.00	ug/kg	2.00	DFG-	WPCL_L-211-05_S_PYD-PYN

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
											WPCL	
2005-04	NAPRIVLWR	19-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	NAPRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-3)	2	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	NAPRIVUP	19-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	PETRIVLWR	20-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	PETRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	PETRIVUP	20-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANLORCRKUP	03-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANLORCRKUP	20-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKUP	04-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-3)	1	DNQ J,VNBC	3.06	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SUICRKLWR	19-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SUICRKUP	03-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SUICRKUP	19-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	COYCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	COYCRKUP	01-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	COYCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-4)	2	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	NAPRIVLWR	19-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	NAPRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-4)	2	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	NAPRIVUP	19-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	PETRIVLWR	20-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	PETRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	PETRIVUP	20-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANLORCRKUP	03-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANLORCRKUP	20-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKUP	04-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SUICRKLWR	19-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SUICRKUP	03-Nov-04	3ORG	6PYRETH_iso	Cyfluthrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SUICRKUP	19-Apr-05	3ORG	6PYRETH_iso	Cyfluthrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	COYCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	COYCRKUP	01-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	COYCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-1)	2	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	NAPRIVLWR	19-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-	WPCL_L-211-05_S_PYD-PYN

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
											WPCL	
2004-11	NAPRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-1)	2	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	NAPRIVUP	19-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	PETRIVLWR	20-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	PETRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	PETRIVUP	20-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANLORCRKUP	03-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANLORCRKUP	20-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKUP	04-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-1)	1	DNQ J,VNBC	4.17	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SUICRKLWR	19-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SUICRKUP	03-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SUICRKUP	19-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	COYCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	COYCRKUP	01-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	COYCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-2)	2	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	NAPRIVLWR	19-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	NAPRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-2)	2	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	NAPRIVUP	19-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	PETRIVLWR	20-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	PETRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	PETRIVUP	20-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANLORCRKUP	03-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANLORCRKUP	20-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKUP	04-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SUICRKLWR	19-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SUICRKUP	03-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SUICRKUP	19-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	COYCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	COYCRKUP	01-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	COYCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-3)	2	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	NAPRIVLWR	19-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	NAPRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-3)	2	ND VNBC	0.00	ug/kg	2.00	DFG-	WPCL_L-523-537-04_S_PYD-PYN

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
											WPCL	
2005-04	NAPRIVUP	19-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	PETRIVLWR	20-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	PETRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	PETRIVUP	20-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANLORCRKUP	03-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANLORCRKUP	20-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKUP	04-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SUICRKLWR	19-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SUICRKUP	03-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SUICRKUP	19-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-3)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	COYCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	COYCRKUP	01-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	COYCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-4)	2	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	NAPRIVLWR	19-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	NAPRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-4)	2	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	NAPRIVUP	19-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	PETRIVLWR	20-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	PETRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	PETRIVUP	20-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANLORCRKUP	03-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANLORCRKUP	20-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKUP	04-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SUICRKLWR	19-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SUICRKUP	03-Nov-04	3ORG	6PYRETH_iso	Cypermethrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SUICRKUP	19-Apr-05	3ORG	6PYRETH_iso	Cypermethrin (isomer-4)	1	ND VNBC	0.00	ug/kg	2.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	COYCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Esfenvalerate (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	COYCRKUP	01-Nov-04	3ORG	6PYRETH_iso	Esfenvalerate (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	COYCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Esfenvalerate (isomer-1)	2	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	NAPRIVLWR	19-Apr-05	3ORG	6PYRETH_iso	Esfenvalerate (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	NAPRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Esfenvalerate (isomer-1)	2	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	NAPRIVUP	19-Apr-05	3ORG	6PYRETH_iso	Esfenvalerate (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-	WPCL_L-211-05_S_PYD-PYN

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
											WPCL	
2005-04	PETRIVLWR	20-Apr-05	3ORG	6PYRETH_iso	Esfenvalerate (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	PETRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Esfenvalerate (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	PETRIVUP	20-Apr-05	3ORG	6PYRETH_iso	Esfenvalerate (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	6PYRETH_iso	Esfenvalerate (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANLORCRKUP	03-Nov-04	3ORG	6PYRETH_iso	Esfenvalerate (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANLORCRKUP	20-Apr-05	3ORG	6PYRETH_iso	Esfenvalerate (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	6PYRETH_iso	Esfenvalerate (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Esfenvalerate (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKUP	04-Nov-04	3ORG	6PYRETH_iso	Esfenvalerate (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Esfenvalerate (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SUICRKLWR	19-Apr-05	3ORG	6PYRETH_iso	Esfenvalerate (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SUICRKUP	03-Nov-04	3ORG	6PYRETH_iso	Esfenvalerate (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SUICRKUP	19-Apr-05	3ORG	6PYRETH_iso	Esfenvalerate (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	COYCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Esfenvalerate (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	COYCRKUP	01-Nov-04	3ORG	6PYRETH_iso	Esfenvalerate (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	COYCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Esfenvalerate (isomer-2)	2	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	NAPRIVLWR	19-Apr-05	3ORG	6PYRETH_iso	Esfenvalerate (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	NAPRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Esfenvalerate (isomer-2)	2	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	NAPRIVUP	19-Apr-05	3ORG	6PYRETH_iso	Esfenvalerate (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	PETRIVLWR	20-Apr-05	3ORG	6PYRETH_iso	Esfenvalerate (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	PETRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Esfenvalerate (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	PETRIVUP	20-Apr-05	3ORG	6PYRETH_iso	Esfenvalerate (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	6PYRETH_iso	Esfenvalerate (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANLORCRKUP	03-Nov-04	3ORG	6PYRETH_iso	Esfenvalerate (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANLORCRKUP	20-Apr-05	3ORG	6PYRETH_iso	Esfenvalerate (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	6PYRETH_iso	Esfenvalerate (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Esfenvalerate (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKUP	04-Nov-04	3ORG	6PYRETH_iso	Esfenvalerate (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Esfenvalerate (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SUICRKLWR	19-Apr-05	3ORG	6PYRETH_iso	Esfenvalerate (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SUICRKUP	03-Nov-04	3ORG	6PYRETH_iso	Esfenvalerate (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SUICRKUP	19-Apr-05	3ORG	6PYRETH_iso	Esfenvalerate (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	COYCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	COYCRKUP	01-Nov-04	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	COYCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-1)	2	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	NAPRIVLWR	19-Apr-05	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	NAPRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-1)	2	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	NAPRIVUP	19-Apr-05	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	PETRIVLWR	20-Apr-05	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-	1	ND VNBC	0.00	ug/kg	1.00	DFG-	WPCL_L-211-05_S_PYD-PYN

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
					1)						WPCL	
2004-11	PETRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	PETRIVUP	20-Apr-05	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANLORCRKUP	03-Nov-04	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANLORCRKUP	20-Apr-05	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKUP	04-Nov-04	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SUICRKLWR	19-Apr-05	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SUICRKUP	03-Nov-04	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SUICRKUP	19-Apr-05	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-1)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	COYCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	COYCRKUP	01-Nov-04	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	COYCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-2)	2	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	NAPRIVLWR	19-Apr-05	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	NAPRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-2)	2	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	NAPRIVUP	19-Apr-05	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	PETRIVLWR	20-Apr-05	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2004-11	PETRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	PETRIVUP	20-Apr-05	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANLORCRKUP	03-Nov-04	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANLORCRKUP	20-Apr-05	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKUP	04-Nov-04	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SUICRKLWR	19-Apr-05	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SUICRKUP	03-Nov-04	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SUICRKUP	19-Apr-05	3ORG	6PYRETH_iso	Lambda-cyhalothrin (isomer-2)	1	ND VNBC	0.00	ug/kg	1.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	COYCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Permethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	COYCRKUP	01-Nov-04	3ORG	6PYRETH_iso	Permethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	COYCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Permethrin (isomer-1)	2	ND VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	NAPRIVLWR	19-Apr-05	3ORG	6PYRETH_iso	Permethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	NAPRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Permethrin (isomer-1)	2	ND VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	NAPRIVUP	19-Apr-05	3ORG	6PYRETH_iso	Permethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	PETRIVLWR	20-Apr-05	3ORG	6PYRETH_iso	Permethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	PETRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Permethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	3.00	DFG-	WPCL_L-523-537-04_S_PYD-PYN

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
											WPCL	
2005-04	PETRIVUP	20-Apr-05	3ORG	6PYRETH_iso	Permethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	6PYRETH_iso	Permethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANLORCRKUP	03-Nov-04	3ORG	6PYRETH_iso	Permethrin (isomer-1)	1	DNQ J,VNBC	3.77	ug/kg	3.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANLORCRKUP	20-Apr-05	3ORG	6PYRETH_iso	Permethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	6PYRETH_iso	Permethrin (isomer-1)	1	DNQ J,VNBC	3.22	ug/kg	3.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Permethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKUP	04-Nov-04	3ORG	6PYRETH_iso	Permethrin (isomer-1)	1	VNBC	12.20	ug/kg	3.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Permethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SUICRKLWR	19-Apr-05	3ORG	6PYRETH_iso	Permethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SUICRKUP	03-Nov-04	3ORG	6PYRETH_iso	Permethrin (isomer-1)	1	DNQ J,VNBC	3.21	ug/kg	3.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SUICRKUP	19-Apr-05	3ORG	6PYRETH_iso	Permethrin (isomer-1)	1	ND VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	COYCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Permethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	COYCRKUP	01-Nov-04	3ORG	6PYRETH_iso	Permethrin (isomer-2)	1	ND VIL,VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	COYCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Permethrin (isomer-2)	2	ND VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	NAPRIVLWR	19-Apr-05	3ORG	6PYRETH_iso	Permethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	NAPRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Permethrin (isomer-2)	2	ND VIL,VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	NAPRIVUP	19-Apr-05	3ORG	6PYRETH_iso	Permethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	PETRIVLWR	20-Apr-05	3ORG	6PYRETH_iso	Permethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	PETRIVUP	02-Nov-04	3ORG	6PYRETH_iso	Permethrin (isomer-2)	1	ND VIL,VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN

Year_Mo	StationCode	SampleDate	AnalyteGrp1	AnalyteGrp2	Analyte	N	Qual	Result	Units	MDL	Lab	LabBatch
2005-04	PETRIVUP	20-Apr-05	3ORG	6PYRETH_iso	Permethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SANLORCRKLWR	20-Apr-05	3ORG	6PYRETH_iso	Permethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANLORCRKUP	03-Nov-04	3ORG	6PYRETH_iso	Permethrin (isomer-2)	1	ND VIL,VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANLORCRKUP	20-Apr-05	3ORG	6PYRETH_iso	Permethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKLWR	04-Nov-04	3ORG	6PYRETH_iso	Permethrin (isomer-2)	1	ND VIL,VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKLWR	18-Apr-05	3ORG	6PYRETH_iso	Permethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SANMATCRKUP	04-Nov-04	3ORG	6PYRETH_iso	Permethrin (isomer-2)	1	VIL,VNBC	8.26	ug/kg	3.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SANMATCRKUP	18-Apr-05	3ORG	6PYRETH_iso	Permethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2005-04	SUICRKLWR	19-Apr-05	3ORG	6PYRETH_iso	Permethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN
2004-11	SUICRKUP	03-Nov-04	3ORG	6PYRETH_iso	Permethrin (isomer-2)	1	ND VIL,VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-523-537-04_S_PYD-PYN
2005-04	SUICRKUP	19-Apr-05	3ORG	6PYRETH_iso	Permethrin (isomer-2)	1	ND VNBC	0.00	ug/kg	3.00	DFG-WPCL	WPCL_L-211-05_S_PYD-PYN

Appendix Table C.6. Sediment toxicity results from the ambient tributary study in watersheds of the San Francisco Estuary (2004-2005). CNEG = laboratory control sample. UCD-MPSL analyzed all sediment toxicity samples in this study. Lab codes are defined in table 1.1. Note: the initial 2005-04 *H. azteca* experiment was initiated on May 29th, 39 days after sample collection. A sample was considered toxic if both the separate variance t-test and the MSD threshold evaluation indicated toxicity (Qualifier = SL_SFEI).

Qualifer Description:

Qualifier	Description
NSG_SFEI	SFEI-Not significant compared to negative control based on statistical test, alpha of 1%, and the difference between the mean control response and the mean sample response was below the 90th percentile MSD (No criteria met)
NSL_SFEI	SFEI-Not significant compared to negative control based on statistical test, alpha less than 1%, but the difference between the mean control response and the mean sample response was greater than the 90th percentile MSD (Second criteria met)
SG_SFEI	SFEI-Significant compared to negative control based on statistical test, alpha less than 1%, BUT the difference between the mean control response and the mean sample response was below the 90th percentile MSD (Only the first criteria met)
SL_SFEI	SFEI-Significant compared to negative control based on statistical test, alpha of less than 1%, AND the difference between the mean control response and the mean sample response was greater than the 90th percentile MSD (Both criteria met)
X	None - Sample is control or reference and statistical significance is not applicable.

Year-Month	Sample Type Code	StationCode	SampleDate	***Eohaustorius estuarius*** **Survival (%) n=5** MSD threshold Nov. = 76% MSD threshold Apr. = 81%			***Hyalella azteca*** Growth (weight mg/Ind) n=8			***Hyalella azteca*** **Survival (%) n=8** MSD threshold (default)= 80%		
				Qualifier	Result	StDev	Qualifier	Result	StDev	Qualifier	Result	StDev
2004-11	CNEG	CONTROL	12/Nov/2004	X	95	6	X	0.14	0.03	X	98	5
2004-11	Integrated	COYCRKLWR	01/Nov/2004	NSG_SFEI	82	1						
2004-11	Integrated	COYCRKUP	01/Nov/2004				NSG_SFEI	0.13	0.05	NSG_SFEI	83	18
2004-11	Integrated	NAPRIVLWR	02/Nov/2004	NSG_SFEI	86	5						
2004-11	Integrated	NAPRIVUP	02/Nov/2004				NSG_SFEI	0.17	0.07	SG_SFEI	84	9
2004-11	Integrated	PETRIVLWR	02/Nov/2004	NSG_SFEI	85	8						
2004-11	Integrated	PETRIVUP	02/Nov/2004				NSG_SFEI	0.17	0.03	NSG_SFEI	95	5
2004-11	Integrated	SANLORCRKLWR	03/Nov/2004	NSG_SFEI	88	8						
2004-11	Integrated	SANLORCRKUP	03/Nov/2004				NSG_SFEI	0.12	0.04	SL_SFEI	56	24
2004-11	Integrated	SANMATCRKLWR	04/Nov/2004	SL_SFEI	37	14						
2004-11	Integrated	SANMATCRKUP	04/Nov/2004				NSG_SFEI	0.18	0.09	SL_SFEI	19	24
2004-11	Integrated	SUICRKLWR	03/Nov/2004	NSG_SFEI	85	9						
2004-11	Integrated	SUICRKUP	03/Nov/2004				NSG_SFEI	0.18	0.06	NSL_SFEI	71	28

Year-Month	Sample Type Code	StationCode	SampleDate	***Eohaustorius estuarius*** **Survival (%) n=5** MSD threshold Nov. = 76% MSD threshold Apr. = 81%			***Hyalella azteca*** Growth (weight mg/Ind) n=8			***Hyalella azteca*** **Survival (%) n=8** MSD threshold (default)= 80%		
				Qualifier	Result	StDev	Qualifier	Result	StDev	Qualifier	Result	StDev
2005-04	CNEG	CONTROL	29/Apr/2005	X	100	0						
2005-04	CNEG	CONTROL	27/May/2005				X	0.27	0.06	X	84	14
2005-04	Integrated	COYCRKLWR	18/Apr/2005	SG_SFEI	86	3						
2005-04	Integrated	COYCRKUP	18/Apr/2005				NSG_SFEI	0.22	0.07	SL_SFEI	66	14
2005-04	Integrated	NAPRIVLWR	19/Apr/2005	NSG_SFEI	98	5						
2005-04	Integrated	NAPRIVUP	19/Apr/2005				NSG_SFEI	0.33	0.1	NSG_SFEI	83	14
2005-04	Integrated	PETRIVLWR	20/Apr/2005	NSG_SFEI	85	9						
2005-04	Integrated	PETRIVUP	20/Apr/2005				NSG_SFEI	0.34	0.06	NSG_SFEI	78	15
2005-04	Integrated	SANLORCRKLWR	20/Apr/2005	NSG_SFEI	81	18						
2005-04	Integrated	SANLORCRKUP	20/Apr/2005				SG_SFEI	0.39	0.07	NSG_SFEI	86	9
2005-04	Integrated	SANMATCRKLWR	18/Apr/2005	SL_SFEI	33	12						
2005-04	Integrated	SANMATCRKUP	18/Apr/2005				NSG_SFEI	0.63	0.15	SL_SFEI	4	5
2005-04	Integrated	SUICRKLWR	19/Apr/2005	NSG_SFEI	84	18						
2005-04	Integrated	SUICRKUP	19/Apr/2005				NSG_SFEI	0.33	0.09	NSG_SFEI	88	15

APPENDIX D. FIELD SAMPLE - LABORATORY REPORT OF SEDIMENT TOXICITY TESTS (SEE CHAPTER 1)

Report of Sediment Toxicity Test Results

PRISM Episodic Toxicity

By the
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Department of Environmental Toxicology

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Submitted to:
The San Francisco Estuary Institute

November 2005

Introduction

Sediments were collected from upstream and downstream stations from six tributaries of San Francisco Bay as part of the PRISM Episodic Toxicity project. Sediments were collected in November 2004 and April 2005. This report presents the data obtained from these toxicity tests, including:

- The mean percent survival of the amphipods *Eohaustorius estuarius* after exposure to solid-phase sediments for 10 days,
- The mean percent survival of the amphipods *Hyalella azteca* after exposure to solid-phase sediments for 10 days,
- The point estimate (LC50) values for organism reference toxicant tests,

Methods

Sample Handling

Sediment samples were collected from November 1-4, 2004 and April 18-20, 2005, under the supervision of Applied Marine Sciences (AMS), and were stored on ice in the dark at AMS prior to delivery (see attached copy of chain of custody form). Samples were transferred in coolers with ice, arriving at the Marine Pollution Studies Laboratory (MPSL) on November 9, 2004 and April 22, 2005. The first round of amphipod tests with *Eohaustorius estuarius* and *Hyalella azteca* were initiated on November 12, 2004. For the second round, *E. estuarius* tests were initiated on April 29, 2005, and *H. azteca* tests were initiated on May 27, 2005. All tests were initiated within the 14-day holding time specified in the MPSL Quality Assurance Project Plan for these tests except for the second round *H. azteca* tests. These samples were held for 39 days prior to testing.

Solid-phase samples were prepared as described in the amphipod protocols (US EPA 1994 and US EPA 2000). Sediment was re-homogenized in the sample jar with a polypropylene spoon, and then distributed to replicate test beakers. Overlying water was added to the test containers, and sediment and overlying water were allowed to equilibrate overnight before the amphipods were added.

Controls and Measurement of Physical/Chemical Parameters
Positive control reference toxicant tests were conducted for all species using cadmium chloride dilutions to bracket the LC50 values for each species. The negative control for the *E. estuarius* solid-phase test consisted of five laboratory replicates of home sediment, which was clean well-sorted fine-grained sand collected at the same place and time as the test amphipods. The negative controls for the *H. azteca* tests consisted of eight laboratory replicates of formulated sediment. Formulated sediment was created using equal parts Salinas River, California reference site sediment and clean, kiln-dried sand (#60, RMC Pacific Materials, Monterey, CA, USA). The sediment was amended with 0.75% organic peat moss (Uni-Gro, Chino, CA, USA). One kilogram (dry weight) of formulated sediment was prepared by combining 500g reference sediment, 500g sand, and 7.5g peat with 350 mL well water.

Water quality parameters of dissolved oxygen, pH, conductivity, and salinity were measured using a Hach SensIon selective ion meter with appropriate electrodes; and ammonia and sulfide were measured spectrophotometrically. Temperature was measured using a continuously recording thermograph and thermometer.

Ammonia was measured in overlying water and interstitial water in the solid-phase *E. estuarius* test, and hydrogen sulfide was measured in the interstitial water only. These compounds can be toxic to test organisms at concentrations found in some test sediments, and their concentrations must be quantified to determine whether they may be responsible for observed toxicity. It is difficult to measure the exact concentrations to which the free-burrowing infaunal amphipods are exposed during the test. Measurement of overlying water may underestimate exposure, and measurement of interstitial water may overestimate exposure, because the mobile amphipods may avoid sulfide-rich deeper layers and may emerge from the sediment or seek refuge in very shallow oxidized sediment layers. Both interstitial and overlying measurements are given in this report to indicate the likely range of exposure concentrations.

Interstitial water was extracted via centrifugation of 50-mL sediment samples collected from extra replicate test beakers on day 0 and day 10 of the test. Sulfide samples were preserved with zinc acetate immediately after centrifugation, and interstitial pH and ammonia samples were measured within one hour of centrifugation.

The detection limit for total ammonia is 0.1 mg/L and the detection limit for total sulfide is 0.25 mg/L. Unionized ammonia and hydrogen sulfide concentrations vary depending on pH. With a pH range of 7.5 to 8.5 the unionized ammonia concentration will range from 0.7 to 6.2% of total ammonia and the hydrogen sulfide concentration will range from 2.0 to 16.6% of total sulfide.

Data Analysis
Toxicity testing data from each sample were compared to laboratory controls using separate-variance t-tests. There was no field replication, and variance among the five laboratory replicates was used as the variance component in the t-tests. The separate-variance t-test is similar to a simple Student's t-test, with degrees of freedom adjusted to account for any heterogeneity of variance between samples. The t-test was employed to simply indicate whether differences between test samples and controls were statistically significant at the given alpha level (0.05). The alpha level used in this analysis is different from the one used for the San Francisco Regional

Monitoring Program (0.01). An alpha level of 0.05 is standard for the State Water Resources Control Board's Surface Water Ambient Monitoring Program.

Additional statistical methods were applied to determine sample toxicity, because a t-test can often detect small differences between samples when there is low variance among laboratory replicates. Such small differences may not be biologically significant. Many sediment assessment studies using amphipods have established a criterion of 80% of the control value; samples with amphipod survival above this value are not considered toxic regardless of t-test results (Schimmel *et al.* 1994, US EPA/ACOE 1991). This 80% Minimum Significant Difference (MSD) criterion was created using data from sediment tests using *Ampelisca abdita*. We have produced a similar MSD using data from San Francisco Regional Monitoring Program *E. estuarius* tests (Phillips *et al.* 2001). This analysis indicates that the *E. estuarius* test is capable of identifying statistically significant differences in 90% of cases where the difference between the treatment and the control is 18.8%. We currently do not have a MSD value for *H. azteca*, so the default threshold of 80% was used. *Hyalella azteca* survival was compared directly to a default 80% threshold, but the growth data was normalized to the control data before being compared to the 80% threshold.

In order to evaluate whether samples were significantly more toxic than samples collected from reference areas in San Francisco Bay, the data were compared to tolerance limits developed using a "reference envelope" approach (Smith 1995). These tolerance limits were adopted from previous studies in San Francisco Bay (Hunt *et al.* 1998). Samples producing survival less than the tolerance limits are expected (with 95% confidence) to be more toxic than the most toxic 10% of reference site samples. The tolerance limit was 69.5% of the control value for *E. estuarius* in homogenized sediment (with $p = 10$ and $\alpha = 0.05$; Hunt *et al.* 1998).

Results and Discussion

Toxicity Tests

E. estuarius survival in control home sediments from November 2004 and April 2005 was 95 ± 6% and 95 ± 6%, respectively. *E. estuarius* were healthy and not negatively affected by laboratory conditions or handling. In both sampling periods, Lower San Mateo Creek sediment produced *E. estuarius* survival significantly less than that observed in the controls, as indicated by t-tests ($\alpha = 0.01$) and MSD (Table 1). Survival values for Lower San Mateo Creek were also significantly less than expected of the most toxic 10% of reference site samples.

H. azteca survival in control home sediments from November 2004 and April 2005 was 98 ± 5% and 84 ± 14%, respectively. *H. azteca* were also healthy and not negatively affected by laboratory conditions or handling. In both sampling periods, Upper San Mateo Creek sediment produced *H. azteca* survival significantly less than that observed in the controls, as indicated by t-tests ($\alpha = 0.01$) and an 80% threshold (Table 2). Additionally, Upper San Lorenzo Creek was significantly toxic in November 2004 and Upper Coyote Creek was significantly toxic in April 2005 (Table 2). There were no significant reductions in *H. azteca* growth in either sampling period.

Water Quality Measurements of Test Sediments and Elutriates

Dissolved oxygen, pH and salinity measurements were all within acceptable ranges for *E. estuarius* and *H. azteca* except for some salinity and hydrogen sulfide concentrations for *E. estuarius* (Tables

3 and 4). Application limits have not been established for hydrogen sulfide in the US EPA protocol because of the assumed ability of amphipods to emerge from sediments and escape into overlying water where H_2S is rapidly oxidized. Knezovich *et al.* (1995) lists the water only Lowest Observed Effect Concentration (LOEC) for *E. estuarius* at 0.114 mg/L H_2S. Several *E. estuarius* samples exceeded this hydrogen sulfide concentration (Table 3), but there was no significant toxicity in these samples. Measurements of total ammonia and unionized ammonia were all below the application limit established in the US EPA amphipod protocol for *E. estuarius* (0.8 mg/L, US EPA 1994), and were below the *E. estuarius* unionized ammonia 96-hour LC50 of 2.490 mg/L (Kohn *et al.* 1994).

Reference Toxicant Tests

Amphipod cadmium responses, measured as the LC50s, were within the limits of the control chart (Figures 1 and 2), indicating that test organisms responded to the toxicant in a manner consistent with previous tests.

Quality Assurance

Water quality parameters measured during tests were within specified ranges, with the following exception. Salinity outside of the quality assurance range occurred in several *E. estuarius* samples. Although these samples were 1-2 parts per thousand above the recommended salinity range for the test, the salinity was well within the tolerance range of the organisms. Temperature was within ± 2°C for all tests.

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Table 1. Means and standard deviations of percent survival for E. estuarius. Shaded areas indicate sample mean was significantly different than control mean based on separate variance t-test (1-tailed, alpha = 0.01), and the difference between the mean control response and the mean sample response was greater than the 90th percentile minimum significant difference (MSD). Bold numbers indicate sample mean was less than that expected at San Francisco Bay reference sites, based on "reference envelope" analysis (69.5% surviva, p = 10%, alpha = 0.05; Smith 1995; Hunt *et al.* 1998).

	November 2004		April 2005	
Station	Mean	SD	Mean	SD
Coyote Lower	82	10	86	3
Napa Lower	86	5	98	5
Petaluma Lower	85	8	85	9
San Lorenzo Lower	88	8	81	18
San Mateo Lower	37	14	33	12
Suisun Lower	85	9	84	18
Control	95	6	100	0

Table 2. Means and standard deviations of percent survival and growth (mg/individual) for *H. azteca*. Shaded areas indicate sample mean was significantly different than control mean based on separate variance t-test (1-tailed, alpha = 0.01), and the difference between the mean control response and the mean sample response was greater than the 90th percentile minimum significant difference (MSD).

	November 2004				April 2005			
	Survival		Growth		Survival		Growth	
Station	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Coyote Upper	83	18	0.126	0.047	66	14	0.218	0.074
Napa Upper	84	9	0.172	0.068	83	14	0.330	0.100
Petaluma Upper	95	5	0.168	0.033	78	15	0.342	0.057
San Lorenzo Upper	56	24	0.115	0.043	86	9	0.392	0.070
San Mateo Upper	19	24	0.180	0.091	4	5	0.633	0.153
Suisun Upper	71	28	0.178	0.059	88	15	0.333	0.091
Control	98	5	0.143	0.026	84	14	0.272	0.062

Table 3. Physical/chemical measurements of test solutions in the *E. estuarius* toxicity test. Measurements were taken at the beginning and end of each test (indicated by Day). ND indicates measurements below detection limit. NA indicates that sample was not analyzed. Shaded boxes indicate measurements outside of quality control range, as discussed above.

		Overlying					Interstitial					
Site	Day	pH	DO	Sal	Total Amm	Un-ion Amm	pH	Sal	Total Amm	Un-ion Amm	Total S2-	H2S
		unit	mg/L	‰	mg/L	mg/L	unit	‰	mg/L	mg/L	mg/L	mg/L
Coyote Lower	0	8.00	8.30	19.4	0.5	0.012	7.57	11	4.4	0.039	0.0344	0.0062
Napa Lower	0	7.94	8.25	20.7	0.4	0.008	7.46	16	3.8	0.026	0.0651	0.0143
Petaluma Lower	0	7.86	8.19	21.1	0.9	0.015	7.6	20	4.7	0.045	ND	ND
San Lorenzo Lower	0	7.92	7.92	19.5	0.7	0.014	7.22	13	5.7	0.023	0.1265	0.0416
San Mateo Lower	0	7.90	8.11	21.5	0.1	0.002	7.09	22	3.5	0.010	0.0098	0.0039
Suisun Lower	0	7.69	7.64	20.1	0.2	0.002	7.1	12	2.6	0.008	ND	ND
HOME	0	7.90	8.28	21.1	ND	ND	NA	NA	NA	NA	NA	NA
Coyote Lower	10	8.06	8.54	20.5	0.3	0.008	7.23	19.4	6.9	0.028	0.0344	0.0111
Napa Lower	10	7.97	8.20	22	0.4	0.009	7.16	21.1	2.9	0.010	0.0467	0.0168
Petaluma Lower	10	7.84	8.08	23.4	0.2	0.003	7.22	18.4	3.7	0.015	0.0098	0.0032
San Lorenzo Lower	10	8.44	8.13	20.6	7.2	0.447	6.88	19.9	13.7	0.025	0.0283	0.0146
San Mateo Lower	10	7.98	8.17	23.5	1.4	0.031	6.84	23.5	5.4	0.009	ND	ND
Suisun Lower	10	7.86	8.56	20.5	0.7	0.012	6.9	19.2	2.8	0.005	ND	ND
HOME	10	7.96	8.18	25.6	0.5	0.011	NA	NA	NA	NA	NA	NA
Coyote Lower	0	7.62	7.53	18.8	ND	ND	7.19	7.4	2.4	0.009	0.2033	0.0700
Napa Lower	0	7.59	6.46	16.3	1.3	0.012	6.79	5.8	8.2	0.012	0.6194	0.3522
Petaluma Lower	0	7.42	8.29	19.4	ND	ND	6.79	15	ND	ND	0.4367	0.2483
San Lorenzo Lower	0	7.65	8.07	19	ND	ND	6.84	6	9.6	0.016	0.5737	0.3099
San Mateo Lower	0	7.55	7.97	18.8	0.2	0.002	6.98	17.4	ND	ND	0.2794	0.1285
Suisun Lower	0	7.62	7.73	17.1	0.9	0.009	6.76	7.4	1.9	0.003	0.1627	0.0953
HOME	0	7.74	8.29	20	0	0.000	NA	NA	NA	NA	NA	NA
Coyote Lower	10	7.92	8.20	19.9	ND	ND	7.35	16	5.6	0.030	0.2541	0.0677
Napa Lower	10	7.91	8.12	17.4	0.3	0.006	6.81	12	14.2	0.022	0.2896	0.1614
Petaluma Lower	10	7.81	7.89	20.1	ND	ND	6.88	18	2.8	0.005	0.3200	0.1655
San Lorenzo Lower	10	8.06	8.00	18.8	4	0.107	7.24	16	15	0.062	0.2236	0.0713
San Mateo Lower	10	7.81	5.00	20.6	3.6	0.055	7.38	18	10.2	0.058	0.2642	0.0669
Suisun Lower	10	7.75	8.29	17.7	ND	ND	6.78	15	3.3	0.005	0.1779	0.1022
HOME	10	7.92	8.27	22.9	ND	ND	NA	NA	NA	NA	NA	NA

Table 4. Physical/chemical measurements of test solutions in the *H. azteca* toxicity test. Measurements were taken at the beginning and end of each test (indicated by Day). ND indicates measurements below detection limit. NA indicates that sample was not analyzed.

Site	Day	Overlying pH	DO	Cond	Total Amm	Un-ion Amm
		unit	mg/L	uS/cm	mg/L	mg/L
Coyote Upper	0	8.22	7.21	869	0	0.000
Napa Upper	0	8.3	7.75	1488	0.3	0.031
Petaluma Upper	0	8.24	7.77	1807	0.4	0.036
San Lorenzo Upper	0	8.12	7.00	688	ND	ND
San Mateo Upper	0	8.07	6.48	713	0.4	0.025
Suisun Upper	0	8.14	6.18	862	ND	ND
HOME	0	8.17	6.71	1098	0.3	0.023
Coyote Upper	10	8.09	6.13	837	0.3	0.020
Napa Upper	10	7.76	5.60	675	1	0.032
Petaluma Upper	10	7.84	5.79	710	1.8	0.068
San Lorenzo Upper	10	8.38	5.51	720	1.3	0.156
San Mateo Upper	10	8.22	5.05	690	1.9	0.164
Suisun Upper	10	7.74	5.60	678	2.2	0.067
HOME	10	7.94	6.31	660	2.1	0.099
Coyote Upper	0	7.94	7.17	790	0.7	0.033
Napa Upper	0	7.71	5.29	788	1.1	0.031
Petaluma Upper	0	7.68	6.59	880	1.2	0.032
San Lorenzo Upper	0	7.59	2.34	813	0.2	0.004
San Mateo Upper	0	7.36	2.31	856	3.8	0.049
Suisun Upper	0	7.67	6.62	736	0.9	0.023
HOME	0	7.4	2.48	1161	2.8	0.039
Coyote Upper	10	8.36	5.12	839	1.2	0.138
Napa Upper	10	8.55	4.84	843	1.8	0.302
Petaluma Upper	10	7.89	3.75	873	2.6	0.110
San Lorenzo Upper	10	8.47	5.27	890	1	0.144
San Mateo Upper	10	7.84	4.23	870	3.7	0.140
Suisun Upper	10	7.98	4.93	822	2.3	0.119
HOME	10	8.42	5.54	862	5.9	0.768

Figure 1. Plot of the LC50 values for E. estuarius reference toxicant tests conducted at MPSL.

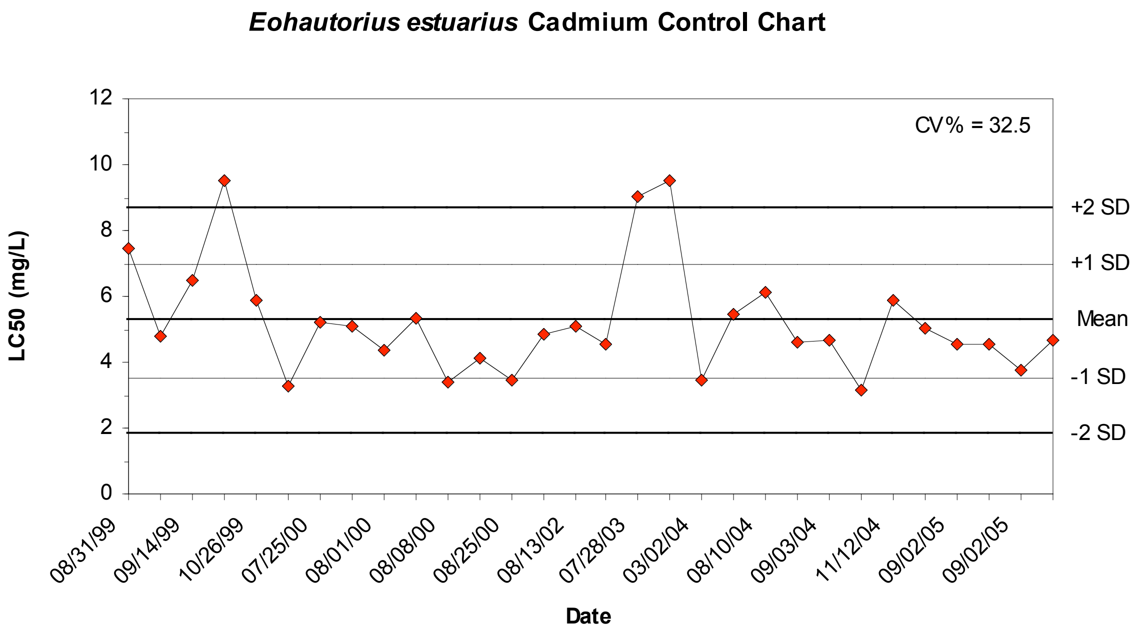
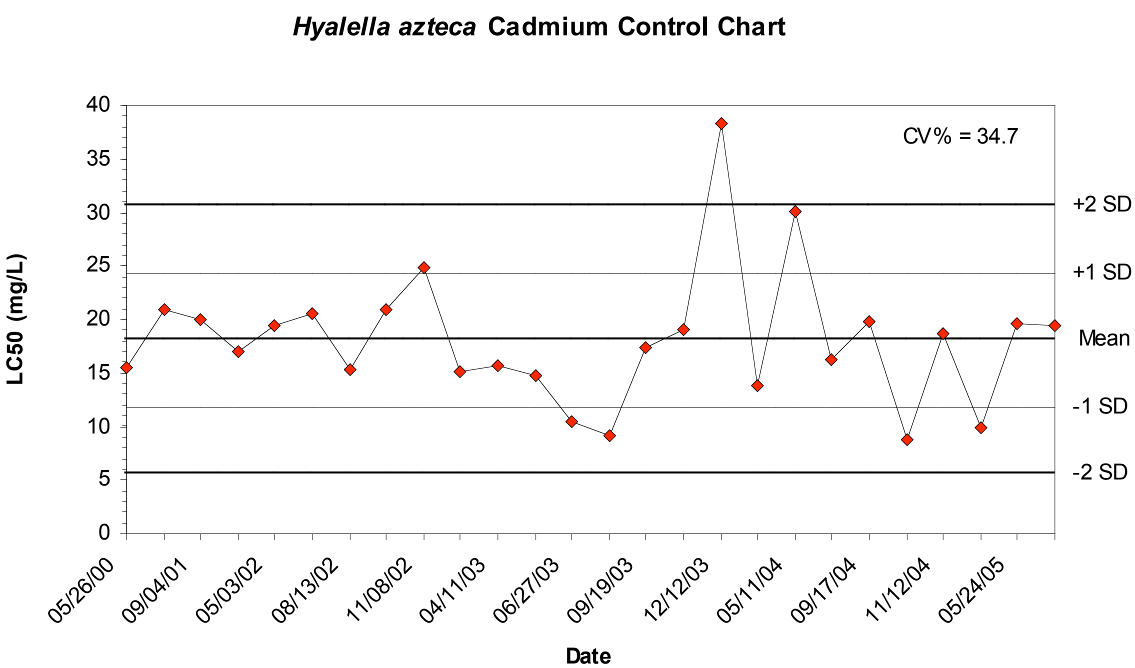


Figure 2. Plot of the EC50 values for *M. galloprovincialis* reference toxicant tests conducted at MPSL.



APPENDIX E. PYRETHROID WORKSHOP AGENDAS AND MEETING NOTES

Development of water and sediment TIE methods for pyrethroid pesticides

SWRCB PRISM Projects

Workshop Agenda
March 28, 2005

Item	Time
Introductions and workshop goals (Sarah Lowe SFEI)	**10:00 – 10:15**
Overview of sediment TIE methods for Prism project (Anderson/Phillips)	**10:15 – 10:45**
Overview of sediment TIE methods (Weston)	**10:45 – 11:15**
Overview of water TIE methods for Prism project (Miller)	**11:15 – 11:45**
Overview of pyrethroid analytical methods development for Prism (Oros)	**11:45 - 12:15**
Working Lunch Break	**12:15 – 12:30**
Overview of pyrethroid analytical methods development (Crane/Mekebri)	**12:30 – 13:00**
Overview of pyrethroid analytical methods development (Kuivila)	**13:00 – 13:30**
Discussion of sediment and water column TIE methodology needs and…	**13:30 –**
merging of toxicology and analytical chemistry to support TIEs for pyrethroids	**15:30**
Identification of data/methodology gaps for Region 5 grants (Larson/group)	**15:30 – 15:45**
adjourn	

PRISM Workgroup Meeting Notes, March 28, 2005

Summary of current pyrethroid TIE projects (presented by meeting participants) and list of chemistry and toxicity information gaps

Meeting participants: Brian Anderson, Sarah Lowe; Jeff Miller; Daniel Oros; Abdu Mekebri; Dave Crane; Don Weston; Erin Amweg; Bryn Phillips; Jeff Miller; Kathy Kuivila; Kelly Moran; Karen Larsen; Stephanie Fong

I. Toxicity TIE projects and related work

Who is doing what?

1. MPSL: Sediment TIE development (focus on *Hyalella*)
   - LC50s for several pyrethroids for freshwater and estuarine species
   - Spiked sediment – bifenthrin, cypermethrin, bifenthrin/chlorpyrifos
   - All current TIE techniques – carboxylesterase, Piperonyl butoxide (PBO),
   - HPLC fractionation
   - Synergism of mixtures

2. Weston (UCB): Sediment TIE development (focus on *Hyalella*)
   - LC50s for six pyrethroids for freshwater species
   - Temperature effects
   - Piperonyl butoxide (PBO) potentiation
   - Esterase?

3. Miller (Aqua Science)
   - HPLC of 6 pyrethroids
   - Antibodies
   - Esterase
   - ELISAs
   - Pyrethroid losses on container walls

II. Chemistry Data Gaps

1. Detection Limits
   - Lowest possible (saltwater is lower than freshwater) - LC50s of marine species are generally lower than freshwater species. Need to identify test species and target MDLs less than their LC50s.

2. Water

   What measurements should be reported?
   - Dissolved concentration
   - Total concentration

- Colloidal concentration

3. Sediment

   What measurements should be reported?
   - Pore water concentration
   - Pore water with dissolved organic matter (DOM)
   - Sediment concentration

4. Field Sampling

   How should field sampling be conducted?

   What materials are best for sampling?
   - Containers (amber, glass bottles)
   - Storage (4ºC for water and ≤0ºC for sediments (except SedTox = 4ºC)
   - Holding times (degradation)
   - Collection procedures
   - Isomer procedures

Chemical Methods (Not a data gap and included here for information purposes)

Laboratory	Extraction Method	Analysis Method
CDFG		GC-ECD
CDFG		GC/MS-MS
AXYS		GC/HR-MS
AXYS		LC/MS-MS
Aqua Science		HPLC

III. Toxicity, Sediment TIE, and Water TIE Data Gaps

1. Sublethal toxicity/chronic toxicity

2. Isomer toxicity

3. Mixtures
   - Additivity of pyrethroids
   - Synergism of mixtures

4. Temperature
   Do our laboratory methods represent real world conditions?
   (Some pyrethroids seem to be more toxic at lower temperatures, which may not be captured in the laboratory method.)

5. Sensitivity especially to marine organisms

6. Field Sampling procedures
   - Collection procedures – Ag. Waiver monitoring study is investigating one type of container for water toxicity sampling.
   - Storage
   - Holding times (degradation)

IV. New compounds on the horizon & more information (from Kelly Moran)

List of pesticides that have been put on the "threat list" for urban surface waters and wastewater discharges, based on a literature review, toxicity data, pesticide use patterns, and sales and use data for California. This list is specific to urban areas:

(a) Pyrethroids--of greatest interest for urban surface water quality are bifenthrin, cyfluthrin (including beta-cyfluthrin), cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, and permethrin. (Note: Based on recent commercial retail product changes, tralomethrin may join this list, so I suggest trying to include it too when possible).
(b) Carbaryl
(c) Malathion
(d) Polyhexamethylenebiguanide (PHMB)
(e) Fipronil

This list is in the recommendations section of a soon-to-be-released report Kelly Moran is doing on urban pesticide use in California. It should be out in mid-April (2005).

At the meeting I neglected to mention that folks might find the annual series of reports I'm doing for the Urban Pesticide Pollution Prevention Project (UP3 Project) to be interesting. They include a report on regulatory affairs (EPA and DPR actions and coming actions and water quality agency participation in them), a report on research and monitoring information from the literature (including reports from the gray literature) that could inform California water quality agencies in their action plans to prevent pesticide-related surface water toxicity, and a report on urban pesticide use trends for pesticides that are the greatest threats to urban surface waters (including POTW discharges). All these reports are on the UP3 Project web site (www.UP3Project.org --quickest access is on the "documents" page, which you can link to from the upper toolbar).

PYRETHROIDS WORKSHOP

"Facing Up to the Challenges in Pyrethroid Methods Development and Field Monitoring"

SFEI, 7770 Pardee Lane, 2nd Floor, Oakland, CA

May 11, 2006, 9:00 am-4:30 pm

PROGRAM

8:00 Sign-in and Refreshments

8:55 Welcome (Daniel Oros, SFEI)

Toxicology Studies (Session Chair: Sarah Lowe, SFEI)

9:00 Brian Anderson, UC Davis
Recent Advances in Sediment TIEs Emphasizing Pyrethroid Pesticides

9:45 Inge Werner, UC Davis
Effects of Pyrethroids on Early Life Stages of Chinook Salmon

10:30 Break (15 min)

10:45 Don Weston, UC Berkeley
An Overview of Sediment Toxicity and Pyrethroid Pesticides Throughout the Central Valley

11:30 Group discussion on toxicology topics of concern (Lead by Session Chair)

12:00 Lunch (Catered Lunch, Courtesy of RMP)

Chemistry Studies (Session Chair: Daniel Oros, SFEI)

12:30 Jay Gan, UC Riverside
Water and Sediment Analysis: Issues and Challenges

1:15 Million Woudneh, AXYS
Analysis of Pyrethroids, Pyrethrins and Piperonyl Butoxide in Surface Water and Sediments by HRGC/HRMS

2:00 Break (10 min)

2:10 Abdou Mekebri and Dave Crane, CDFG
Analysis of Pyrethroids at Environmentally Relevant Levels

2:55 Michelle Hladik, US Geological Survey
Sample Processing and Analysis of Pyrethroids in Water and Suspended Sediments

3:40 Break (5 min)

3:45 Kelly Moran, TDC Environmental
Update on Pesticide Information Use in Water Quality and Regulatory Programs

4:30 Meeting Wrap-Up

PYRETHROIDS WORKSHOP MEETING SUMMARY

"Facing Up to the Challenges in Pyrethroid Methods Development and Field Monitoring"
SFEI, 7770 Pardee Lane, 2nd Floor, Oakland, CA
May 11, 2006, 9:00 am-4:30 pm

This meeting was supported by two PRISM Grants #04-135-55-20 and #04-134-55-20, and the Regional Monitoring Program for Water Quality in San Francisco Bay – Episodic Toxicity Program (RMP-EpTox).

The Goal of the meeting was to provide the opportunity for toxicologists and chemists, who are investigating pyrethroid detection and effects in the environment, to get together and discuss findings, methods, and processes.

Last year many participants of this meeting met to outline pyrethroid work being conducted by PRISM grantees and others so as to identify information needs in both chemical methods development and Toxicology. To that end, this meeting was a forum to get together again and share research findings.

Toxicology Studies (Session Chairs: Sarah Lowe, SFEI; Brian Anderson UC Davis)

Presentations:

Brian Anderson, UC Davis
Recent Advances in Sediment TIEs Emphasizing Pyrethroid Pesticides

Inge Werner, UC Davis
Effects of Pyrethroids on Early Life Stages of Chinook Salmon

Don Weston, UC Berkeley
An Overview of Sediment Toxicity and Pyrethroid Pesticides Throughout the Central Valley (Presentation not available)

Major points:

1. Toxicity Identification Evaluations useful for determining toxicity caused by pyrethroid pesticides have come a long way towards becoming standardized.
2. Current considerations:
3. Sensitive detection limits are necessary in chemical analyses of sediment, porewater, and TIE fractions.

4. Type of columns, solvents, and flow rates used to extract and elute pyrethroids from sediment and porewater continues to be subject of continuing research in developing TIE methods. Discussion between toxicologists and chemists was helpful to investigate alternative methods. Continued discussion between disciplines is essential to fine-tune the methods.

5. Studies suggest that it is important chemistry labs have a comprehensive analyte list which includes the 13 pyrethroid pesticides now in use.

6. PBO is a strong synergist which inhibits in vivo pesticide metabolism, and is found periodically in ambient samples. This chemical should be included in chemical analyses where pyrethroid toxicity is of concern.

7. Sub-lethal, behavioral and biochemical effects (cytokine production) from pulses of pyrethroid exposure indicate immune system response in fish even 2 months after a short-term pyrethroid exposure.

8. Swimming performance appears to be another sensitive measure of pyrethroid exposure effects (Debra Denton dissertation).

Chemistry Studies (Session Chair: Daniel Oros, SFEI)

Presentations:

Jay Gan, UC Riverside

Water and Sediment Analysis: Issues and Challenges

Million Woudneh, AXYS

Analysis of Pyrethroids, Pyrethrins and Piperonyl Butoxide in Surface Water and Sediments by HRGC/HRMS

Abdou Mekebri and Dave Crane, CDFG

Analysis of Pyrethroids at Environmentally Relevant Levels

- Liquid-liquid extraction was the best method when compared to SPE or SPME
- GC-ECD is sensitive with GC-MS confirmation yields good detection and sensitivity

Michelle Hladik, US Geological Survey

Sample Processing and Analysis of Pyrethroids in Water and Suspended Sediments

Major points:

1. Partitioning of pyrethroids in the environment and factors influencing bioavailability: pyrethoids in the dissolved fraction may be tightly bound to dissolved organic matter (DOM) and possibly biologically unavailable. Further investigation on partitioning is warranted.
2. Lower detection limits: Need to get lower limits as the toxicologists are finding that organisms are extremely sensitive to some pyrethroids.
3. Several methods have been developed to identify pyrethroids in ambient samples.
4. False identification of compounds is a concern.
5. Identification of enantiomers/isomers is important as some are more toxic than others (also see above #3).

Regulatory Update on Emerging Contaminants (specifically pesticides)

Presentations:

Kelly Moran, TDC Environmental

Update on Pesticide Information Use in Water Quality and Regulatory Programs

Debra Denton, EPA-Region 9

Update EPA's Information usage and needs

(Presentation not available)

Major points:

1. Anyone monitoring current use pesticides in surface water should send their data to DPR for entry in the DPR database. DPR is looking for good quality monitoring results for surface water or sediment. Putting your data in their database will help all of us working to manage pesticides & water quality issues with understanding the problems from pesticides (and identifying the non-problems). There is some information on DPR's web site at

http://www.cdpr.ca.gov/docs/sw/surfdata.htm The database is managed by Keith Starner at DPR--his contact information is on the web site. It is best to call him before sending your data, as he can talk with you about how it would be easiest for you and for him to transfer the data. He prefers electronic data submittals. The SWAMP format works well for him.

2. There is still a need to identify how urban uses of pyrethroids (Urban sprays around buildings to control ants, lawn/garden use, pre-construction termiticide use, etc.) links to the presence of pyrethroids in urban creeks.
3. Many urban use pesticides are not being monitored in the environment. The UP3 Project web site has a list of pesticides that are of concern for urban surface water quality. Ones where monitoring is particularly lacking are fipronil & degradates and the biocide polyhexamethylene biguanadine (PHMB), which is very toxic to rainbow trout.
4. The Urban Pesticide Pollution Prevention (UP3) website is a helpful resource for publications and to find out what's being used locally (http://www.up3project.org/up3_index.shtml). Please send Kelly Moran any publication citations or white papers that relate to urban pesticide usage or related topics.
5. EPA is using DPR data and GIS tools to assist in targeted site evaluations.

Data Gaps Identified by the Group:

1. More LC50s are needed to establish the sensitivity of estuarine organisms to pyrethroids; EC50 data for both fresh water and estuarine organisms is needed.
2. Characterize the influence of ambient temperatures on pyrethroid toxicity. Laboratory tests of field samples are conducted at standard temperature limits (~23C). Some pyrethroids are more toxic at lower temperatures. Lower ambient temperatures may result in greater in situ toxicity than would be observed in laboratory tests.
3. Product signatures – it is important to identify specific chemicals (enantiomers/isomers) that are causing observed toxicity as specific compounds may be traced back to a probable source.
4. Sublethal effects are extremely important to evaluating long-term ecological health of the ecosystem. Specific biochemical measures have been developed to the point where they can clearly indicate organismal suppression of the immune system making the organism susceptible to effects of mixtures which individually may not be clearly linked to a toxic effect but synergistically may be affecting the ecological integrity of a study site. (This seems like several data-gaps…)
5. Identify and articulate the best solvents/mechanisms for getting the TIE fractions to the chemistry laboratory so that there is minimal loss/dilution of sample: solvents, containers, holding times. It would be good to have a spiking study to quantify individual losses of the different pyrethroids by various methods.
6. Hydrographic data should be characterized in order to target the most likely locations for potential toxicity or presence of contaminants.
7. Source identification: connecting specific urban uses Urban structural pest control (above ground), lawn/garden use, construction use, etc.) to pyrethroid levels in creeks.
8. Water column toxicity: characterize duration in ambient samples.
   There are a few studies:
   Ag Monitoring in Central Valley (monthly, limited data)
   DPR-Stormwater studies
9. Pesticide identification in urban creeks: new and emerging pesticides and other contaminants are not being adequately characterized in urban creeks.

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