SWAMP
Surface Water Ambient Monitoring Program

Water Quality Monitoring Report	2000-06

Appendices for Summary Report for the North Coast Region (RWQCB-1) for years 2000-2006

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APPENDIX A.

A.1._____Quality Assurance and Quality Control

The data generated by SWAMP may be used to determine the status of beneficial uses throughout the state, assess trends, make regulatory and management decisions, and support enforcement of policies. Thorough objectives for achieving quality data are outlined in the Quality Assurance Management Plan (QAMP). In general, data quality is demonstrated through analysis of:

- Laboratory method blanks
- Surrogate spikes
- Matrix spikes and matrix spike duplicates
- Certified reference materials/laboratory control spikes
- Laboratory Duplicates
- Field blind duplicates

The percent recovery (%R) acceptance criteria for surrogate spikes, matrix spikes and matrix spike duplicates, certified reference materials/laboratory control spikes, and relative percent difference (RPD) acceptance criteria for both laboratory and field duplicates are presented in Table A.1.

Data for Project IDs 00SW1001, 01SW1001, and 02SW1002 have been verified according to SWAMP Standard Operating Procedures (SOPs) for chemistry and field data verification. The data verification process determines whether the data are compliant with the individual measurement quality objectives (MQOs) specified in the SWAMP QAMP. Data are classified as compliant with the SWAMP QAMP, estimated, non-compliant with the SWAMP QAMP, or rejected if the data were rejected by the reporting laboratory.

Data for Project IDs 03SW1001 and 04SW1001 have not been verified and are not included in this section of the report. These data are considered draft data and are used in the rest of the report.

No data have been validated. This section does not attempt to determine whether or not data should be used. That can only be done after data validation and comparison to project-specific data quality objectives (DQOs).

A.1.1._____Laboratory Method Blanks

Laboratory method blanks were used to assess laboratory contamination introduced during sample preparation and analysis. The method blanks were processed in a manner identical to the associated field samples. According to the QAMP for conventional, organic and inorganic analyses, at least one laboratory method blank should be analyzed per 20 samples or one per batch, whichever is more frequent. Batches that did not include

laboratory method blanks at the required frequency were classified as estimated (Table A.2).

Water laboratory method blanks were considered acceptable if target analyte concentrations were below their respective method detection limit (MDL). All laboratory method blanks were acceptable with the exception of 551 blanks in which concentrations of target analytes were above the MDL but less than the reporting limit (RL) (Table A.3). None of the water blanks had detectable levels of analytes above their respective RLs. These data were classified as compliant with regard to the SWAMP QAMP MQO for laboratory blanks

A.1.2. Surrogate Spikes

Surrogate spikes were used to assess analyte losses during sample extraction and clean-up procedures, and must be added to every field and quality control sample prior to extraction. Whenever possible, isotopically-labeled analogs of the analytes should be used.

All surrogate spikes were added as required with the exception of samples analyzed for:

- Glyphosate and AMPA by EPA Method 547M,
- Phenols by EPA Method 604M,
- Chlorothalanil and PCNB by EPA Method 608M, and
- Carbamate Pesticides by EPA Method 632M.

Per DFG-WPCL, which performed the analyses, their modifications to these methods do not utilize surrogates; therefore the data was classified as SWAMP-compliant. All surrogate %Rs were within the acceptance criteria (Table A.1).

A.1.3. Matrix Spikes and Matrix Spike Duplicates

A laboratory-fortified sample matrix (matrix spike, or MS) and a laboratory-fortified sample matrix duplicate (MSD) were both used to evaluate the effect of the sample matrix on the recovery of the target analyte(s). Individually, these samples were used to assess the bias from an environmental sample matrix plus normal method performance. In addition, these duplicate samples can be used collectively to assess analytical precision.

Aliquots of randomly selected field samples were spiked with known amounts of target analytes. This process was repeated for a subset of field samples to create MSDs.

The %R of each spike was calculated as follows:

Equation 1: %R= (MS Result – Sample Result)/ (Expected Value – Sample Result) * 100

The MS/MSD RPDs were calculated as

Equation 2: RPD= |((Value1-Value2)| / (AVERAGE (Value1+Value2)))*100
Where: Value1 = matrix spike value
Value2 = matrix spike duplicate value.

The MS/MSD %R and RPD acceptance criteria are presented in Table A.1.

According to the QAMP for conventional, organic and inorganic analyses, at least one MS/MSD pair should be performed per 20 samples or one per batch, whichever is more frequent. Eight percent of the batches (82 out of 1057 total batches) did not include MS/MSDs performed at the required frequency. These 82 batches were classified as estimated (Appendix A Table 4).

Laboratory batches with MS/MSD %R and RPD values outside of acceptance criteria are presented in Table A.5. All other MS/MSD %Rs and RPDs were within acceptance criteria.

A.1.4. Certified Reference Materials, Laboratory Control Materials, and Laboratory Control Samples

Certified reference materials (CRMs), laboratory control materials (LCMs), and laboratory control samples (LCSs) were analyzed to assess the accuracy of a given analytical method. As required by the QAMP, one CRM, LCM, or LCS should be performed per 20 samples or one per batch, whichever is more frequent. Seven percent of the batches (72 out of 1057 total batches) did not include CRMs, LCSs, or LCMs performed at the required frequency. These 72 batches were classified as estimated (Table A.6).

The % recovery for the CRM/LCS is calculated as follows:

%R = (measured result/certified/expected value) * 100.

The CRM, LCM, and LCS %R acceptance criteria are presented in Table A.1. The CRM, LCM, and LCS recoveries outside acceptance criteria are presented in Table A.7. All other CRM, LCM, and LCS %Rs were within acceptance criteria.

A.1.5. Laboratory Duplicates

Laboratory duplicates (DUPs) were analyzed to assess laboratory precision. As required by the QAMP, at least one duplicate of a field sample should be performed per 20 samples or one per batch, whichever is more frequent. Two percent of the batches (19 out of 961 total batches) did not include DUPs performed at the required frequency. These 19 batches were classified as estimated (Table A.8).

Laboratory duplicate values were compared to field sample values from the same site and RPDs were calculated as in Section 3.3 Equation 2 where Value1=field sample value and Value2=duplicate sample value.

Laboratory batches with RPDs >25% were classified as estimated (Table A.9). All other DUP RPDs were within acceptance criteria.

A.1.6. Field Blind Duplicates and Field Duplicates

Field blind duplicates and field duplicates were analyzed to assess variability introduced by field sampling procedures. Field blind duplicates and field duplicates were sampled at 19 stations for waters. Water samples were taken by collecting a separate grab sample immediately following the collection of the field sample. Field duplicate values were compared to field sample values from each site and RPDs were calculated as in Section 3.3 Equation 2 where Value1=field sample value and Value2=duplicate sample value.

RPDs <25% were considered acceptable as specified in the QAMP. Laboratory batches with RPDs >25% were classified as estimated (Appendix A Table10). All other RPDs were within acceptance criteria.

A.1.7. Contamination

On February 12, 2004, the CDFG Water Pollution Control Laboratory (DFG-WPCL) notified SWAMP participants of a low level of contamination that occurred in samples analyzed for NO_3 by flow injection analysis method (FIA). The contamination (0.036 ± 0.027 mg l^{-1} [36 ppb]) was significant only for NO_3 results reported <0.150 mg l^{-1} (150 ppb). Samples that were analyzed via FIA and are therefore positively biased by 0.036 mg l^{-1} are presented in Table A.11.

A.1.8. Field Data Measurements

The procedures followed when conducting routine field data measurements for the SWAMP program can be found in Appendix E of the SWAMP QAMP. Field equipment used to take field data measurements is required to be calibrated within 24 hours of use and within 24 hours after field measurement activities are performed. Per the SWAMP QAMP, at a minimum the following equipment should be calibrated; titration equipment, thermometers, DO meters, pH meters, conductivity meters, and multi-parameter field meters. After post-calibration checks are performed, the percent drift should be evaluated. If data has been collected outside compliance, (% drift is outside criteria found in Appendix E of the SWAMP QAMP), it should not be reported unless it has been flagged to indicate non-compliance.

Field data measurements reported for Region 1 Project IDs 00SW1002, 01SW1001, and 02SW1001 include; dissolved oxygen, oxygen saturation, pH, specific conductivity, temperature, turbidity, and velocity. Of these field measurement results, five specific conductivity, 12 velocity, 20 temperature, 28 pH, 29 dissolved oxygen, 54 oxygen

saturation, and 108 turbidity results were classified as estimated due to one of the following; probe failures, no flow, calibration exceedances, and no documentation of the field measurement collection existed.

A.2. QA/QC Summary

Data that meet all SWAMP Measurement Quality Objectives (MQOs) as specified in the QAMP are classified as "SWAMP-compliant" and considered usable without further evaluation. Data that fail to meet all program MQOs specified in the SWAMP QAMP, have analytes not covered in the SWAMP QAMP, or are insufficiently documented such that supplementary information is required for them to be used in reports are classified as "estimated" non-compliant with the SWAMP QAMP. Rejected data batches do not meet minimum requirements and /or have gross errors or omissions; data were classified as rejected when the reporting laboratory rejected the data. During the Data Quality Assessment (DQA) phase of reporting, end users may find estimated data batches meet project data quality objectives.

There were 36,559 sample results, including; grab samples, fielddups, fieldbldups, and field blanks, of which 15,833 were classified as compliant, 20,699 were classified as estimated and 27 were classified as rejected. The summary of data classification on the dataset reported is as follows:

- All data presented in Table A.3 was classified as SWAMP-compliant since the analytes detected in the laboratory blanks met the QAMP criteria of less than the RL for laboratory blank contamination.
- All surrogate spikes were added as required with the exception of samples analyzed for Glyphosate and AMPA by EPA Method 547M, Phenols by EPA Method 604M, Chlorothalanil and PCNB by EPA Method 608M, and Carbamate Pesticides by EPA Method 632M. Per DFG-WPCL, which performed the analyses, their modifications to these methods do not utilize surrogates therefore the data was classified as SWAMP-compliant.
- All data presented in Appendix A Tables 2, 4, 6, and 8 was classified as estimated due to insufficient QC samples performed.
- All data presented in Appendix A Tables 9 and 10 was classified as estimated due to RPD exceedances.
- Eighteen hundred and four results were classified as estimated due to holding time exceedances.
- One hundred eighty seven screening level results were classified as estimated.
- Thirty-eight delta-HCH results were classified as rejected by the laboratory.

Table A.1. Percent recovery and relative percent difference acceptance criteria for different categories of analytes in water.

Analyte Category	% Surrogate Recovery Acceptance Criteria	% MS/MSD Recovery Acceptance Criteria	% CRM, LCM, & LCS Acceptance Criteria	Relative % Difference Criteria (MS/MSD, Laboratory Duplicate, Field Duplicate)
Conventional Constituents	NA	80-120	80-120	25
Trace Metals (Including Mercury)	NA	75-125	75-125	25
Synthetic Organics (PCBs, OCHs, OPs, Triazines, Phenols, VOCs,)	50-150	50-150	50-150	25

Table A.2. Batches for which no laboratory blanks were run.

Analyte	Batch ID	Notes	Laboratory
Alkalinity as CaCO3	112102-ALK	QAO: not enough QC, more than 20 samples in batch	DFG-WPCL
Hardness as CaCO3	042303-HARD	QAO: not enough QC, more than 20 samples in batch	DFG-WPCL
OCH Pesticides	L-021003-OCH	QAO: no QC for 2/17	DFG-WPCL
OCH Pesticides	L-022403-OCH	QAO: no blank for 2/24	DFG-WPCL
OCH Pesticides	L-031102-OCH	QAO: no blank for 3/2	DFG-WPCL
OCH Pesticides	L-040102-OCH	QAO: no blank for 3/25 or 3/29	DFG-WPCL
OCH Pesticides	L-041403-OCH	QAO: no QC for 4/12	DFG-WPCL
OCH Pesticides	L-041903-OCH	QAO: no QC for 4/18 and 4/22, no blank for 4/19	DFG-WPCL
OCH Pesticides	L-042503-OCH	QAO: no QC for 4/25	DFG-WPCL
OCH Pesticides	L-051402-OCH	QAO: no blank	DFG-WPCL
OCH Pesticides	L-060503-OCH	QAO: no QC for 6/5	DFG-WPCL
OCH Pesticides	L-061502-OCH	QAO: no blank for 6/8	DFG-WPCL
OCH Pesticides	L-12302-OCH	QAO: no QC for 10/12 or 10/28	DFG-WPCL
OP Pesticides	L-021003-OP	QAO: no blank for 2/17	DFG-WPCL
OP Pesticides	L-022403-OP	QAO: no QC for 2/25	DFG-WPCL
OP Pesticides	L-031002-OPP	QAO: no blank for 3/2/02	DFG-WPCL
OP Pesticides	L-031702-OPP	QAO: not enough QC, more than 20 samples in the batch	DFG-WPCL

Table A.2 (cont'd). Batches for which no laboratory blanks were run.

Analyte	Batch ID	Notes	Laboratory
OP Pesticides	L-032703-OP	QAO: no blank for 3/27	DFG-WPCL
OP Pesticides	L-041403-OP	QAO: no QC for 4/12 and 4/22	DFG-WPCL
OP Pesticides	L-041903-OP	QAO: no QC for 4/18, no blank for 4/19	DFG-WPCL
OP Pesticides	L-042603-OP	QAO: no QC for 4/25 and 4/26	DFG-WPCL
OP Pesticides	L-060503-OP	QAO: no QC for 6/5, no blank for 6/25	DFG-WPCL
OP Pesticides	L-062002-OPP	QAO: no blank	DFG-WPCL
OP Pesticides	L-070602-OPP	QAO: no blank for 6/26 and 6/30	DFG-WPCL
OP Pesticides	L-110202-OP	QAO: no blank for 10/21, no QC for 10/28	DFG-WPCL
Phenols	L-070602-PCP	QAO: no QC for 6/30/2002	DFG-WPCL
PCBs	L-031102-PCB	QAO: no blank for 3/2	DFG-WPCL
PCBs	L-031702-PCB	QAO: not enough QC, more than 20 samples in batch	DFG-WPCL
PCBs	L-040102-PCB	QAO: no blank for 3/25	DFG-WPCL
PCBs	L-041403-PCB	QAO: no QC for 4/12	DFG-WPCL
PCBs	L-041903-PCB	QAO: no QC for 4/19	DFG-WPCL
PCBs	L-042503-PCB	QAO: no QC for 4/25, blank from 5/5 not needed	DFG-WPCL
PCBs	L-051402-PCB	QAO: no blank	DFG-WPCL
PCBs	L-060503-PCB	QAO: no QC for 6/5	DFG-WPCL
PCBs	L-071902-PCB	QAO: no blank for 6/26 or 6/30	DFG-WPCL
PCBs	L-120302-PCB	QAO: no QC for 10/12 and 10/28	DFG-WPCL
Surfactants	L-021003-SURF	QAO: no QC for 2/14, no blank for 2/15	DFG-WPCL
Surfactants	L-022103-SURF	QAO: no QC for 2/24	DFG-WPCL
Surfactants	L-042103-SURF	QAO: no QC for 4/23 and 4/28	DFG-WPCL
Surfactants	L-061703-SURF	QAO: no QC for 6/23	DFG-WPCL
Total Dissolved Solids	021903-TDS	QAO: no blank, CRM	DFG-WPCL
Total Kjeldahl Nitrogen	022603-TKN	QAO: not enough QC, more than 20 samples in batch	DFG-WPCL
Total Mercury	Hg080403	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Mercury	R1-012903-Hg	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG

Table A.2 (cont'd). Batches for which no laboratory blanks were run.

Analyte	Batch ID	Notes	Laboratory
Total Mercury	R1-021803-Hg	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Mercury	t021204	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Mercury	t021704	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Mercury	t051503	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Metals	ICP020603	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Metals	ICP032703	QAO: not enough QC	MPSL-DFG
Total Metals	ICP042903	QAO: not enough QC more than 20 samples in batch	MPSL-DFG
Total Metals	ICP071503a	QAO: not enough QC more than 20 samples in batch	MPSL-DFG
Total Metals	ICP071503b	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Metals	ICP101603	QAO: not enough QC in batch (blanks or CRMs)	MPSL-DFG
Total Metals	R1-101102-ICP	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Metals	R1-100202-ICP	QAO: need another blank more than 20 samples in batch	MPSL-DFG
Total Metals	R1-32702-ICP	QAO: need another blank more than 20 samples in batch	MPSL-DFG
Total Metals	R1-53002-ICP	QAO: need another blank more than 20 samples in batch	MPSL-DFG
Total Metals	R1-80902-ICP	QAO: need another blank more than 20 samples in batch	MPSL-DFG
Total Metals	R7-091302-ICP	QAO: need another blank more than 20 samples in batch	MPSL-DFG
Triazine Pesticides	L-041403-TRIAZ	QAO: no QC for 4/12 and 4/22	DFG-WPCL
Triazine Pesticides	L-041903-TRIAZ	QAO: no QC for 4/18 and 4/21	DFG-WPCL
Triazine Pesticides	L-042603-TRIAZ	QAO: no blank for 4/25 or 4/26	DFG-WPCL
Triazine Pesticides	L-110202-TRIAZ	QAO: no blank for 10/28	DFG-WPCL

Table A.3. Laboratory method blanks in which analytes were detected

Analyte	Result	Units	MDL	RL	Detected	Analysis Date	Method Name	Laboratory	Batch ID
Alkalinity as CaCO3	3	mg/L	3	10	DNQ	11/04/2002	QC 10303311A	DFG-WPCL	110402-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	03/07/2002	QC 10303311A	DFG-WPCL	L-030702-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	03/07/2002	QC 10303311A	DFG-WPCL	L-030802a-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	03/07/2002	QC 10303311A	DFG-WPCL	L-030802-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	03/07/2002	QC 10303311A	DFG-WPCL	L-031602-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	03/21/2002	QC 10303311A	DFG-WPCL	L-032502-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	03/21/2002	QC 10303311A	DFG-WPCL	L-032602-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	03/21/2002	QC 10303311A	DFG-WPCL	L-032802a-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	03/21/2002	QC 10303311A	DFG-WPCL	L-032802-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	04/02/2002	QC 10303311A	DFG-WPCL	L-040502a-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	04/02/2002	QC 10303311A	DFG-WPCL	L-040502-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	04/02/2002	QC 10303311A	DFG-WPCL	L-040802-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	04/02/2002	QC 10303311A	DFG-WPCL	L-040902a-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	04/02/2002	QC 10303311A	DFG-WPCL	L-040902-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	04/16/2002	QC 10303311A	DFG-WPCL	L-041502-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	04/16/2002	QC 10303311A	DFG-WPCL	L-041602-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	04/16/2002	QC 10303311A	DFG-WPCL	L-042402-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	04/29/2002	QC 10303311A	DFG-WPCL	L-050202a-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	04/29/2002	QC 10303311A	DFG-WPCL	L-050202-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	04/29/2002	QC 10303311A	DFG-WPCL	L-050302-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	04/29/2002	QC 10303311A	DFG-WPCL	L-051302-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	04/29/2002	QC 10303311A	DFG-WPCL	L-051502a-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	04/29/2002	QC 10303311A	DFG-WPCL	L-051502-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	05/20/2002	QC 10303311A	DFG-WPCL	L-051002-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	05/20/2002	QC 10303311A	DFG-WPCL	L-051702-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	05/20/2002	QC 10303311A	DFG-WPCL	L-052002-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	05/20/2002	QC 10303311A	DFG-WPCL	L-052002b-ALK

Table A.3 (cont'd). Laboratory method blanks in which analytes were detected

Analyte	Result	Units	MDL	RL	Detected	Analysis Date	Method Name	Laboratory	Batch ID
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	05/20/2002	QC 10303311A	DFG-WPCL	L-052002c-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	05/30/2002	QC 10303311A	DFG-WPCL	L-053002-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	05/30/2002	QC 10303311A	DFG-WPCL	L-053002a-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	06/14/2002	QC 10303311A	DFG-WPCL	L-061402a-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	06/14/2002	QC 10303311A	DFG-WPCL	L-061402-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	06/14/2002	QC 10303311A	DFG-WPCL	L-061802-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	06/24/2002	QC 10303311A	DFG-WPCL	L-062102-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	06/24/2002	QC 10303311A	DFG-WPCL	L-062502-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	06/24/2002	QC 10303311A	DFG-WPCL	L-070102-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	06/24/2002	QC 10303311A	DFG-WPCL	L-070302-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	07/02/2002	QC 10303311A	DFG-WPCL	L-070302a-ALK
Alkalinity as CaCO3	-88	mg/L	3	10	DNQ	07/02/2002	QC 10303311A	DFG-WPCL	L-070502-ALK
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	03/02/2002	EPA 350.3	DFG-WPCL	L-030702-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	03/02/2002	EPA 350.3	DFG-WPCL	L-030802a-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	03/02/2002	EPA 350.3	DFG-WPCL	L-030802-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	03/06/2002	EPA 350.3	DFG-WPCL	L-031602-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	03/15/2002	EPA 350.3	DFG-WPCL	L-032502-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	03/16/2002	EPA 350.3	DFG-WPCL	L-032602-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	03/22/2002	EPA 350.3	DFG-WPCL	L-032802a-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	03/22/2002	EPA 350.3	DFG-WPCL	L-032802-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	03/22/2002	EPA 350.3	DFG-WPCL	L-040802-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	03/27/2002	EPA 350.3	DFG-WPCL	L-040902a-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	03/27/2002	EPA 350.3	DFG-WPCL	L-040902-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	03/28/2002	EPA 350.3	DFG-WPCL	L-040502-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	04/03/2002	EPA 350.3	DFG-WPCL	L-040502a-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	04/10/2002	EPA 350.3	DFG-WPCL	L-041602-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	04/12/2002	EPA 350.3	DFG-WPCL	L-041502-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	04/12/2002	EPA 350.3	DFG-WPCL	L-042402-NH3

Table A.3 (cont'd). Laboratory method blanks in which analytes were detected

Analyte	Result	Units	MDL	RL	Detected	Analysis Date	Method Name	Laboratory	Batch ID
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	04/19/2002	EPA 350.3	DFG-WPCL	L-050202a-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	04/19/2002	EPA 350.3	DFG-WPCL	L-050202-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	04/24/2002	EPA 350.3	DFG-WPCL	L-050302-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	04/26/2002	EPA 350.3	DFG-WPCL	L-051302-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	05/01/2002	EPA 350.3	DFG-WPCL	L-051502-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	05/01/2002	EPA 350.3	DFG-WPCL	L-051502a-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	05/09/2002	EPA 350.3	DFG-WPCL	L-051002-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	05/14/2002	EPA 350.3	DFG-WPCL	L-052002-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	05/17/2002	EPA 350.3	DFG-WPCL	L-051702-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	05/17/2002	EPA 350.3	DFG-WPCL	L-052002a-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	05/17/2002	EPA 350.3	DFG-WPCL	L-052002b-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	05/20/2002	EPA 350.3	DFG-WPCL	L-052002c-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	05/22/2002	EPA 350.3	DFG-WPCL	L-053002-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	05/29/2002	EPA 350.3	DFG-WPCL	L-053002a-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	06/11/2002	EPA 350.3	DFG-WPCL	L-061402-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	06/13/2002	EPA 350.3	DFG-WPCL	L-061402a-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	06/14/2002	EPA 350.3	DFG-WPCL	L-061802-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	06/18/2002	EPA 350.3	DFG-WPCL	L-062102-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	06/21/2002	EPA 350.3	DFG-WPCL	L-062502-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	06/24/2002	EPA 350.3	DFG-WPCL	L-070102-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	06/25/2002	EPA 350.3	DFG-WPCL	L-070302-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	06/26/2002	EPA 350.3	DFG-WPCL	L-070302a-NH3
Ammonia as N	-88	mg/L	0.05	0.1	DNQ	07/03/2002	EPA 350.3	DFG-WPCL	L-070502-NH3
Ammonia as N	0.05	mg/L	0.05	0.1	DNQ	10/10/2002	EPA 350.3	DFG-WPCL	101002-NH3
Ammonia as N	0.058	mg/L	0.05	0.1	DNQ	10/16/2002	EPA 350.3	DFG-WPCL	101602-NH3
Ammonia as N	0.062	mg/L	0.05	0.1	DNQ	10/16/2002	EPA 350.3	DFG-WPCL	101602-NH3-1
Arsenic	0.088	µg/L	0.05	0.1	DNQ	07/03/2002	EPA 1638M	MPSL-DFG	R1-70302-ICP
Cadmium	0.003	µg/L	0.002	0.01	DNQ	03/27/2002	EPA 1638M	MPSL-DFG	R1-32702-ICP

Table A.3 (cont'd). Laboratory method blanks in which analytes were detected

Analyte	Result	Units	MDL	RL	Detected	Analysis Date	Method Name	Laboratory	Batch ID
Chloride	-88	mg/L	0.15	0.25	DNQ	02/26/2002	EPA 300.0	DFG-WPCL	L-030702-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	02/27/2002	EPA 300.0	DFG-WPCL	L-030802-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	02/28/2002	EPA 300.0	DFG-WPCL	L-030802a-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	03/01/2002	EPA 300.0	DFG-WPCL	L-031602-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	03/13/2002	EPA 300.0	DFG-WPCL	L-032502-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	03/27/2002	EPA 300.0	DFG-WPCL	L-032602-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	03/27/2002	EPA 300.0	DFG-WPCL	L-032802a-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	03/27/2002	EPA 300.0	DFG-WPCL	L-032802-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	03/27/2002	EPA 300.0	DFG-WPCL	L-040802-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	03/27/2002	EPA 300.0	DFG-WPCL	L-040902a-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	03/27/2002	EPA 300.0	DFG-WPCL	L-040902-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	03/29/2002	EPA 300.0	DFG-WPCL	L-040502a-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	03/29/2002	EPA 300.0	DFG-WPCL	L-040502-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	04/09/2002	EPA 300.0	DFG-WPCL	L-041602-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	04/10/2002	EPA 300.0	DFG-WPCL	L-041502-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	04/15/2002	EPA 300.0	DFG-WPCL	L-042402-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	04/17/2002	EPA 300.0	DFG-WPCL	L-050202-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	04/19/2002	EPA 300.0	DFG-WPCL	L-050202a-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	04/23/2002	EPA 300.0	DFG-WPCL	L-050302-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	04/24/2002	EPA 300.0	DFG-WPCL	L-051302-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	04/26/2002	EPA 300.0	DFG-WPCL	L-051502a-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	04/26/2002	EPA 300.0	DFG-WPCL	L-051502-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	05/08/2002	EPA 300.0	DFG-WPCL	L-051002-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	05/10/2002	EPA 300.0	DFG-WPCL	L-052002-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	05/14/2002	EPA 300.0	DFG-WPCL	L-051702-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	05/15/2002	EPA 300.0	DFG-WPCL	L-052002a-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	05/16/2002	EPA 300.0	DFG-WPCL	L-052002b-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	05/17/2002	EPA 300.0	DFG-WPCL	L-052002c-CL

Table A.3 (cont'd). Laboratory method blanks in which analytes were detected

Analyte	Result	Units	MDL	RL	Detected	Analysis Date	Method Name	Laboratory	Batch ID
Chloride	-88	mg/L	0.15	0.25	DNQ	05/21/2002	EPA 300.0	DFG-WPCL	L-053002-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	05/24/2002	EPA 300.0	DFG-WPCL	L-053002a-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	06/13/2002	EPA 300.0	DFG-WPCL	L-061402a-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	06/13/2002	EPA 300.0	DFG-WPCL	L-061402-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	06/14/2002	EPA 300.0	DFG-WPCL	L-061802-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	06/18/2002	EPA 300.0	DFG-WPCL	L-062102-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	06/19/2002	EPA 300.0	DFG-WPCL	L-062502-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	06/21/2002	EPA 300.0	DFG-WPCL	L-070102-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	06/24/2002	EPA 300.0	DFG-WPCL	L-070302-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	06/27/2002	EPA 300.0	DFG-WPCL	L-070302a-CL
Chloride	-88	mg/L	0.15	0.25	DNQ	06/28/2002	EPA 300.0	DFG-WPCL	L-070502-CL
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	02/15/2002	SM 10200 H-2b	SFL	R1-021502-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	02/07/2002	SM 10200 H-2b	SFL	R12-020702-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	03/07/2002	SM 10200 H-2b	SFL	R1-030702a-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	03/07/2002	SM 10200 H-2b	SFL	R1-030702b-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	03/07/2002	SM 10200 H-2b	SFL	R1-030702b-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	03/07/2002	SM 10200 H-2b	SFL	R1-030702b-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	03/07/2002	SM 10200 H-2b	SFL	R1-030702b-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	03/22/2002	SM 10200 H-2b	SFL	R1-032202-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	03/22/2002	SM 10200 H-2b	SFL	R1-032202-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	03/22/2002	SM 10200 H-2b	SFL	R1-032202-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	03/25/2002	SM 10200 H-2b	SFL	R1-032502-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	03/25/2002	SM 10200 H-2b	SFL	R1-032502-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	03/25/2002	SM 10200 H-2b	SFL	R1-032502-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	04/05/2002	SM 10200 H-2b	SFL	R1-040502-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	04/05/2002	SM 10200 H-2b	SFL	R1-040502-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	04/05/2002	SM 10200 H-2b	SFL	R1-040502-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	04/05/2002	SM 10200 H-2b	SFL	R1-040502-Chl

Table A.3 (cont'd). Laboratory method blanks in which analytes were detected

Analyte	Result	Units	MDL	RL	Detected	Analysis Date	Method Name	Laboratory	Batch ID
Chlorophyll a	0.75	µg/L	0.5	1	DNQ	04/16/2002	SM 10200 H-2b	SFL	R12-041602-Chl
Chlorophyll a	0.75	µg/L	0.5	1	DNQ	04/16/2002	SM 10200 H-2b	SFL	R12-041602-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	04/19/2002	SM 10200 H-2b	SFL	R12-041902-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	04/23/2002	SM 10200 H-2b	SFL	R12-042302-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	04/23/2002	SM 10200 H-2b	SFL	R12-042302-Chl
Chlorophyll a	0.75	µg/L	0.5	1	DNQ	05/03/2002	SM 10200 H-2b	SFL	R1-050302-Chl
Chlorophyll a	0.75	µg/L	0.5	1	DNQ	05/03/2002	SM 10200 H-2b	SFL	R1-050302-Chl
Chlorophyll a	0.75	µg/L	0.5	1	DNQ	05/03/2002	SM 10200 H-2b	SFL	R1-050302-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	05/15/2002	SM 10200 H-2b	SFL	R14-051502-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	05/16/2002	SM 10200 H-2b	SFL	R17-051602-Chl
Chlorophyll a	0.75	µg/L	0.5	1	DNQ	05/17/2002	SM 10200 H-2b	SFL	R17-051702-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	05/17/2002	SM 10200 H-2b	SFL	R17-051702-Chl
Chlorophyll a	0.75	µg/L	0.5	1	DNQ	05/23/2002	SM 10200 H-2b	SFL	R17-052302-Chl
Chlorophyll a	0.75	µg/L	0.5	1	DNQ	05/23/2002	SM 10200 H-2b	SFL	R17-052302-Chl
Chlorophyll a	0.75	µg/L	0.5	1	DNQ	05/23/2002	SM 10200 H-2b	SFL	R17-052302-Chl
Chlorophyll a	0.75	µg/L	0.5	1	DNQ	05/23/2002	SM 10200 H-2b	SFL	R17-052302-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	07/03/2002	SM 10200 H-2b	SFL	R1-070302-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	07/03/2002	SM 10200 H-2b	SFL	R1-070302-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	07/03/2002	SM 10200 H-2b	SFL	R1-070302-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	07/03/2002	SM 10200 H-2b	SFL	R1-070302-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	07/03/2002	SM 10200 H-2b	SFL	R1-070302-Chl
Chlorophyll a	0.75	µg/L	0.5	1	DNQ	07/10/2002	SM 10200 H-2b	SFL	R12-071002-Chl
Chlorophyll a	0.75	µg/L	0.5	1	DNQ	07/10/2002	SM 10200 H-2b	SFL	R12-071002-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	07/17/2002	SM 10200 H-2b	SFL	R12-071702-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	07/17/2002	SM 10200 H-2b	SFL	R12-071702-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	07/17/2002	SM 10200 H-2b	SFL	R12-071702-Chl
Chlorophyll a	1.25	µg/L	0.5	2	DNQ	07/17/2002	SM 10200 H-2b	SFL	R12-071702-Chl
Chromium	0.048	µg/L	0.03	0.09	DNQ	07/15/2003	EPA 1638M	MPSL-DFG	ICP071503a

Table A.3 (cont'd). Laboratory method blanks in which analytes were detected

Analyte	Result	Units	MDL	RL	Detected	Analysis Date	Method Name	Laboratory	Batch ID
Chromium	0.153	µg/L	0.03	0.459	DNQ	07/16/2003	EPA 1638M	MPSL-DFG	ICP071603
Copper	0.008	µg/L	0.003	0.01	DNQ	02/22/2002	EPA 1638M	MPSL-DFG	R1-22202-ICP
Copper	0.008	µg/L	0.003	0.03	DNQ	10/02/2002	EPA 1638M	MPSL-DFG	R1-100202-ICP
Copper	0.06	µg/L	0.003	0.18	DNQ	07/16/2003	EPA 1638M	MPSL-DFG	ICP071603
Endosulfan sulfate	0.001	µg/L	0.001	0.002	DNQ	02/17/2002	EPA 8081AM	DFG-WPCL	L-021702-OCH
Endosulfan sulfate	0.001	µg/L	0.001	0.002	DNQ	03/11/2002	EPA 8081AM	DFG-WPCL	L-031102-OCH
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	03/04/2002	SM 2340 C	DFG-WPCL	L-030702-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	03/08/2002	SM 2340 C	DFG-WPCL	L-030802a-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	03/08/2002	SM 2340 C	DFG-WPCL	L-030802-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	03/08/2002	SM 2340 C	DFG-WPCL	L-031602-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	03/13/2002	SM 2340 C	DFG-WPCL	L-032502-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	03/15/2002	SM 2340 C	DFG-WPCL	L-032602-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	03/20/2002	SM 2340 C	DFG-WPCL	L-032802a-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	03/20/2002	SM 2340 C	DFG-WPCL	L-032802-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	03/29/2002	SM 2340 C	DFG-WPCL	L-040502a-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	03/29/2002	SM 2340 C	DFG-WPCL	L-040502-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	03/22/2002	SM 2340 C	DFG-WPCL	L-040802-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	03/27/2002	SM 2340 C	DFG-WPCL	L-040902a-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	03/27/2002	SM 2340 C	DFG-WPCL	L-040902-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	04/09/2002	SM 2340 C	DFG-WPCL	L-041602-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	04/10/2002	SM 2340 C	DFG-WPCL	L-041502-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	04/12/2002	SM 2340 C	DFG-WPCL	L-042402-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	04/17/2002	SM 2340 C	DFG-WPCL	L-050202-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	04/19/2002	SM 2340 C	DFG-WPCL	L-050202a-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	04/23/2002	SM 2340 C	DFG-WPCL	L-050302-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	04/24/2002	SM 2340 C	DFG-WPCL	L-051302-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	04/29/2002	SM 2340 C	DFG-WPCL	L-051502-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	04/29/2002	SM 2340 C	DFG-WPCL	L-051502a-H

Table A.3 (cont'd). Laboratory method blanks in which analytes were detected

Analyte	Result	Units	MDL	RL	Detected	Analysis Date	Method Name	Laboratory	Batch ID
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	05/08/2002	SM 2340 C	DFG-WPCL	L-051002-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	05/10/2002	SM 2340 C	DFG-WPCL	L-052002-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	05/15/2002	SM 2340 C	DFG-WPCL	L-051702-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	05/15/2002	SM 2340 C	DFG-WPCL	L-052002a-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	05/17/2002	SM 2340 C	DFG-WPCL	L-052002b-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	05/17/2002	SM 2340 C	DFG-WPCL	L-052002c-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	05/24/2002	SM 2340 C	DFG-WPCL	L-053002a-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	05/24/2002	SM 2340 C	DFG-WPCL	L-053002-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	06/11/2002	SM 2340 C	DFG-WPCL	L-061402-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	06/13/2002	SM 2340 C	DFG-WPCL	L-061402a-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	06/14/2002	SM 2340 C	DFG-WPCL	L-061802-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	06/18/2002	SM 2340 C	DFG-WPCL	L-062102-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	06/20/2002	SM 2340 C	DFG-WPCL	L-062502-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	06/27/2002	SM 2340 C	DFG-WPCL	L-070302-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	07/01/2002	SM 2340 C	DFG-WPCL	L-070102-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	07/01/2002	SM 2340 C	DFG-WPCL	L-070502-H
Hardness as CaCO3	-88	mg/L	0.5	1	DNQ	07/01/2002	SM 2340 C	DFG-WPCL	L-070302a-H
Lead	0.009	µg/L	0.006	0.01	DNQ	05/31/2002	EPA 1638M	MPSL-DFG	R1-53102-ICP
Lead	0.003	µg/L	0.002	0.05	DNQ	03/27/2003	EPA 1638M	MPSL-DFG	ICP032703
Lead	0.005	µg/L	0.002	0.05	DNQ	03/27/2003	EPA 1638M	MPSL-DFG	ICP032703
Manganese	0.28	µg/L	0.003	0.84	DNQ	07/16/2003	EPA 1638M	MPSL-DFG	ICP071603
Nickel	0.012	µg/L	0.006	0.018	DNQ	10/16/2003	EPA 1638M	MPSL-DFG	ICP101603
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	02/26/2002	QC 10107041B	DFG-WPCL	L-030702-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	02/27/2002	QC 10107041B	DFG-WPCL	L-030802-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	02/28/2002	QC 10107041B	DFG-WPCL	L-030802a-NO3
Nitrate as N	-88	mg/L	0.09	0.23	DNQ	03/01/2002	EPA 300.0	DFG-WPCL	L-031602-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	03/13/2002	QC 10107041B	DFG-WPCL	L-032502-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	03/15/2002	QC 10107041B	DFG-WPCL	L-032602-NO3

Table A.3 (cont'd). Laboratory method blanks in which analytes were detected

Analyte	Result	Units	MDL	RL	Detected	Analysis Date	Method Name	Laboratory	Batch ID
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	03/20/2002	QC 10107041B	DFG-WPCL	L-032802a-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	03/20/2002	QC 10107041B	DFG-WPCL	L-032802-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	03/28/2002	QC 10107041B	DFG-WPCL	L-040502-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	03/29/2002	QC 10107041B	DFG-WPCL	L-040502a-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	04/09/2002	QC 10107041B	DFG-WPCL	L-040802-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	04/09/2002	QC 10107041B	DFG-WPCL	L-040902a-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	04/09/2002	QC 10107041B	DFG-WPCL	L-040902-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	04/09/2002	QC 10107041B	DFG-WPCL	L-041602-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	04/10/2002	QC 10107041B	DFG-WPCL	L-041502-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	04/12/2002	QC 10107041B	DFG-WPCL	L-042402-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	04/18/2002	QC 10107041B	DFG-WPCL	L-050202-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	04/19/2002	QC 10107041B	DFG-WPCL	L-050202a-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	04/23/2002	QC 10107041B	DFG-WPCL	L-050302-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	04/25/2002	QC 10107041B	DFG-WPCL	L-051302-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	05/01/2002	QC 10107041B	DFG-WPCL	L-051502a-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	05/01/2002	QC 10107041B	DFG-WPCL	L-051502-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	05/09/2002	QC 10107041B	DFG-WPCL	L-051002-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	05/10/2002	QC 10107041B	DFG-WPCL	L-052002-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	05/14/2002	QC 10107041B	DFG-WPCL	L-051702-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	05/15/2002	QC 10107041B	DFG-WPCL	L-052002a-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	05/16/2002	QC 10107041B	DFG-WPCL	L-052002b-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	05/17/2002	QC 10107041B	DFG-WPCL	L-052002c-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	05/21/2002	QC 10107041B	DFG-WPCL	L-053002-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	05/24/2002	QC 10107041B	DFG-WPCL	L-053002a-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	06/11/2002	QC 10107041B	DFG-WPCL	L-061402-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	06/13/2002	QC 10107041B	DFG-WPCL	L-061402a-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	06/14/2002	QC 10107041B	DFG-WPCL	L-061802-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	06/18/2002	QC 10107041B	DFG-WPCL	L-062102-NO3

Table A.3 (cont'd). Laboratory method blanks in which analytes were detected

Analyte	Result	Units	MDL	RL	Detected	Analysis Date	Method Name	Laboratory	Batch ID
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	06/20/2002	QC 10107041B	DFG-WPCL	L-062502-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	06/21/2002	QC 10107041B	DFG-WPCL	L-070302-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	06/26/2002	QC 10107041B	DFG-WPCL	L-070302a-NO3
Nitrate as N	-88	mg/L	0.005	0.01	DNQ	06/28/2002	QC 10107041B	DFG-WPCL	L-070502-NO3
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	02/26/2002	QC 10107041B	DFG-WPCL	L-030702-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	02/27/2002	QC 10107041B	DFG-WPCL	L-030802-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	02/28/2002	QC 10107041B	DFG-WPCL	L-030802a-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	03/01/2002	QC 10107041B	DFG-WPCL	L-031602-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	03/13/2002	QC 10107041B	DFG-WPCL	L-032502-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	03/15/2002	QC 10107041B	DFG-WPCL	L-032602-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	03/19/2002	QC 10107041B	DFG-WPCL	L-032802-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	03/20/2002	QC 10107041B	DFG-WPCL	L-032802a-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	03/22/2002	QC 10107041B	DFG-WPCL	L-040802-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	03/26/2002	QC 10107041B	DFG-WPCL	L-040902-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	03/27/2002	QC 10107041B	DFG-WPCL	L-040902a-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	03/28/2002	QC 10107041B	DFG-WPCL	L-040502-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	03/29/2002	QC 10107041B	DFG-WPCL	L-040502a-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	04/09/2002	QC 10107041B	DFG-WPCL	L-041602-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	04/10/2002	QC 10107041B	DFG-WPCL	L-041502-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	04/12/2002	QC 10107041B	DFG-WPCL	L-042402-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	04/17/2002	QC 10107041B	DFG-WPCL	L-050202-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	04/19/2002	QC 10107041B	DFG-WPCL	L-050202a-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	04/23/2002	QC 10107041B	DFG-WPCL	L-050302-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	04/24/2002	QC 10107041B	DFG-WPCL	L-051302-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	04/26/2002	QC 10107041B	DFG-WPCL	L-051502a-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	04/26/2002	QC 10107041B	DFG-WPCL	L-051502-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	05/08/2002	QC 10107041B	DFG-WPCL	L-051002-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	05/10/2002	QC 10107041B	DFG-WPCL	L-052002-NO2

Table A.3 (cont'd). Laboratory method blanks in which analytes were detected

Analyte	Result	Units	MDL	RL	Detected	Analysis Date	Method Name	Laboratory	Batch ID
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	05/14/2002	QC 10107041B	DFG-WPCL	L-051702-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	05/15/2002	QC 10107041B	DFG-WPCL	L-052002a-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	05/16/2002	QC 10107041B	DFG-WPCL	L-052002b-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	05/17/2002	QC 10107041B	DFG-WPCL	L-052002c-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	05/21/2002	QC 10107041B	DFG-WPCL	L-053002-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	05/24/2002	QC 10107041B	DFG-WPCL	L-053002a-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	06/11/2002	QC 10107041B	DFG-WPCL	L-061402-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	06/13/2002	QC 10107041B	DFG-WPCL	L-061402a-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	06/14/2002	QC 10107041B	DFG-WPCL	L-061802-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	06/18/2002	QC 10107041B	DFG-WPCL	L-062102-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	06/19/2002	QC 10107041B	DFG-WPCL	L-062502-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	06/21/2002	QC 10107041B	DFG-WPCL	L-070302-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	06/26/2002	QC 10107041B	DFG-WPCL	L-070302a-NO2
Nitrite as N	-88	mg/L	0.005	0.01	DNQ	06/28/2002	QC 10107041B	DFG-WPCL	L-070502-NO2
Nitrite as N	0.00522	mg/L	0.005	0.01	DNQ	06/12/2003	QC 10107041B	DFG-WPCL	061203-NO2
Nonylphenol	0.67	µg/L	0.5	2	DNQ	06/24/2003	JACR97_3247-3272	DFG-WPCL	L-061703-SURF
OrthoPhosphate as P	-88	mg/L	0.03	0.05	DNQ	02/26/2002	EPA 365.3	DFG-WPCL	L-030702-OPO4
OrthoPhosphate as P	-88	mg/L	0.03	0.05	DNQ	02/27/2002	EPA 365.3	DFG-WPCL	L-030802-OPO4
OrthoPhosphate as P	-88	mg/L	0.03	0.05	DNQ	02/28/2002	EPA 365.3	DFG-WPCL	L-030802a-OPO4
OrthoPhosphate as P	-88	mg/L	0.03	0.05	DNQ	03/01/2002	EPA 365.3	DFG-WPCL	L-031602-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	03/13/2002	QC 10115011M	DFG-WPCL	L-032502-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	03/15/2002	QC 10115011M	DFG-WPCL	L-032602-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	03/19/2002	QC 10115011M	DFG-WPCL	L-032802-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	03/20/2002	QC 10115011M	DFG-WPCL	L-032802a-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	03/22/2002	QC 10115011M	DFG-WPCL	L-040802-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	03/26/2002	QC 10115011M	DFG-WPCL	L-040902-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	03/27/2002	QC 10115011M	DFG-WPCL	L-040902a-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	03/28/2002	QC 10115011M	DFG-WPCL	L-040502-OPO4

Table A.3 (cont'd). Laboratory method blanks in which analytes were detected

Analyte	Result	Units	MDL	RL	Detected	Analysis Date	Method Name	Laboratory	Batch ID
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	03/29/2002	QC 10115011M	DFG-WPCL	L-040502a-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	04/09/2002	QC 10115011M	DFG-WPCL	L-041602-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	04/10/2002	QC 10115011M	DFG-WPCL	L-041502-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	04/12/2002	QC 10115011M	DFG-WPCL	L-042402-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	04/17/2002	QC 10115011M	DFG-WPCL	L-050202-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	04/19/2002	QC 10115011M	DFG-WPCL	L-050202a-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	04/23/2002	QC 10115011M	DFG-WPCL	L-050302-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	04/24/2002	QC 10115011M	DFG-WPCL	L-051302-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	04/26/2002	QC 10115011M	DFG-WPCL	L-051502a-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	04/26/2002	QC 10115011M	DFG-WPCL	L-051502-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	05/08/2002	QC 10115011M	DFG-WPCL	L-051002-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	05/10/2002	QC 10115011M	DFG-WPCL	L-052002-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	05/14/2002	QC 10115011M	DFG-WPCL	L-051702-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	05/15/2002	QC 10115011M	DFG-WPCL	L-052002a-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	05/16/2002	QC 10115011M	DFG-WPCL	L-052002b-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	05/17/2002	QC 10115011M	DFG-WPCL	L-052002c-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	05/21/2002	QC 10115011M	DFG-WPCL	L-053002-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	05/24/2002	QC 10115011M	DFG-WPCL	L-053002a-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	06/11/2002	QC 10115011M	DFG-WPCL	L-061402-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	06/13/2002	QC 10115011M	DFG-WPCL	L-061402a-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	06/14/2002	QC 10115011M	DFG-WPCL	L-061802-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	06/18/2002	QC 10115011M	DFG-WPCL	L-062102-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	06/19/2002	QC 10115011M	DFG-WPCL	L-062502-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	06/21/2002	QC 10115011M	DFG-WPCL	L-070302-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	06/26/2002	QC 10115011M	DFG-WPCL	L-070302a-OPO4
OrthoPhosphate as P	-88	mg/L	0.005	0.01	DNQ	06/28/2002	QC 10115011M	DFG-WPCL	L-070502-OPO4
PCB 031	0.001	µg/L	0.001	0.002	DNQ	02/17/2002	EPA 8082M	DFG-WPCL	L-021602-PCB
Silver	0.014	µg/L	0.008	0.02	DNQ	10/02/2002	EPA 1638M	MPSL-DFG	R1-100202-ICP

Table A.3 (cont'd). Laboratory method blanks in which analytes were detected

Analyte	Result	Units	MDL	RL	Detected	Analysis Date	Method Name	Laboratory	Batch ID
Silver	0.0103	µg/L	0.008	0.1	DNQ	02/06/2003	EPA 1638M	MPSL-DFG	ICP020603
Silver	0.01	µg/L	0.008	0.1	DNQ	03/27/2003	EPA 1638M	MPSL-DFG	ICP032703
Sulfate	0.5	mg/L	0.4	1	DNQ	11/20/2002	EPA 300.0	DFG-WPCL	112002-SO4
Sulfate	0.5	mg/L	0.4	1	DNQ	11/21/2002	EPA 300.0	DFG-WPCL	112102-SO4
Sulfate	0.5	mg/L	0.4	1	DNQ	11/26/2002	EPA 300.0	DFG-WPCL	112602-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	02/26/2002	EPA 300.0	DFG-WPCL	L-030702-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	02/27/2002	EPA 300.0	DFG-WPCL	L-030802-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	02/28/2002	EPA 300.0	DFG-WPCL	L-030802a-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	03/01/2002	EPA 300.0	DFG-WPCL	L-031602-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	03/13/2002	EPA 300.0	DFG-WPCL	L-032502-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	03/27/2002	EPA 300.0	DFG-WPCL	L-032602-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	03/27/2002	EPA 300.0	DFG-WPCL	L-032802a-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	03/27/2002	EPA 300.0	DFG-WPCL	L-032802-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	03/27/2002	EPA 300.0	DFG-WPCL	L-040802-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	03/27/2002	EPA 300.0	DFG-WPCL	L-040902a-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	03/29/2002	EPA 300.0	DFG-WPCL	L-040502a-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	03/29/2002	EPA 300.0	DFG-WPCL	L-040502-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	03/26/2002	EPA 300.0	DFG-WPCL	L-040902-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	04/09/2002	EPA 300.0	DFG-WPCL	L-041602-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	04/10/2002	EPA 300.0	DFG-WPCL	L-041502-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	04/15/2002	EPA 300.0	DFG-WPCL	L-042402-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	04/17/2002	EPA 300.0	DFG-WPCL	L-050202-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	04/19/2002	EPA 300.0	DFG-WPCL	L-050202a-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	04/23/2002	EPA 300.0	DFG-WPCL	L-050302-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	04/24/2002	EPA 300.0	DFG-WPCL	L-051302-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	04/26/2002	EPA 300.0	DFG-WPCL	L-051502-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	05/08/2002	EPA 300.0	DFG-WPCL	L-051002-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	05/10/2002	EPA 300.0	DFG-WPCL	L-052002-SO4

Table A.3 (cont'd). Laboratory method blanks in which analytes were detected

Analyte	Result	Units	MDL	RL	Detected	Analysis Date	Method Name	Laboratory	Batch ID
Sulfate	-88	mg/L	0.37	1	DNQ	05/14/2002	EPA 300.0	DFG-WPCL	L-051702-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	05/15/2002	EPA 300.0	DFG-WPCL	L-052002a-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	05/16/2002	EPA 300.0	DFG-WPCL	L-052002b-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	05/17/2002	EPA 300.0	DFG-WPCL	L-052002c-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	05/21/2002	EPA 300.0	DFG-WPCL	L-053002-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	05/24/2002	EPA 300.0	DFG-WPCL	L-053002a-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	06/13/2002	EPA 300.0	DFG-WPCL	L-061402a-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	06/13/2002	EPA 300.0	DFG-WPCL	L-061402-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	06/14/2002	EPA 300.0	DFG-WPCL	L-061802-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	06/18/2002	EPA 300.0	DFG-WPCL	L-062102-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	06/18/2002	EPA 300.0	DFG-WPCL	L-062102-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	06/21/2002	EPA 300.0	DFG-WPCL	L-070102-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	06/24/2002	EPA 300.0	DFG-WPCL	L-070302-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	06/27/2002	EPA 300.0	DFG-WPCL	L-070302a-SO4
Sulfate	-88	mg/L	0.37	1	DNQ	06/28/2002	EPA 300.0	DFG-WPCL	L-070502-SO4
Total Dissolved Solids	-88	mg/L	10	10	DNQ	02/26/2002	SM 2540 C	DFG-WPCL	L-030702-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	02/27/2002	SM 2540 C	DFG-WPCL	L-030802-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	03/01/2002	SM 2540 C	DFG-WPCL	L-030802a-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	03/01/2002	SM 2540 C	DFG-WPCL	L-031602-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	03/13/2002	SM 2540 C	DFG-WPCL	L-032502-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	03/15/2002	SM 2540 C	DFG-WPCL	L-032602-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	03/19/2002	SM 2540 C	DFG-WPCL	L-032802-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	03/20/2002	SM 2540 C	DFG-WPCL	L-032802a-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	03/26/2002	SM 2540 C	DFG-WPCL	L-040802-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	03/26/2002	SM 2540 C	DFG-WPCL	L-040902-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	03/28/2002	SM 2540 C	DFG-WPCL	L-040502-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	03/28/2002	SM 2540 C	DFG-WPCL	L-040902a-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	03/29/2002	SM 2540 C	DFG-WPCL	L-040502a-TDS

Table A.3 (cont'd). Laboratory method blanks in which analytes were detected

Analyte	Result	Units	MDL	RL	Detected	Analysis Date	Method Name	Laboratory	Batch ID
Total Dissolved Solids	-88	mg/L	10	10	DNQ	04/09/2002	SM 2540 C	DFG-WPCL	L-041602-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	04/10/2002	SM 2540 C	DFG-WPCL	L-041502-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	04/15/2002	SM 2540 C	DFG-WPCL	L-042402-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	04/18/2002	SM 2540 C	DFG-WPCL	L-050202-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	04/22/2002	SM 2540 C	DFG-WPCL	L-050202a-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	04/23/2002	SM 2540 C	DFG-WPCL	L-050302-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	04/24/2002	SM 2540 C	DFG-WPCL	L-051302-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	04/29/2002	SM 2540 C	DFG-WPCL	L-051502a-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	04/29/2002	SM 2540 C	DFG-WPCL	L-051502-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	05/08/2002	SM 2540 C	DFG-WPCL	L-051002-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	05/10/2002	SM 2540 C	DFG-WPCL	L-052002-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	05/15/2002	SM 2540 C	DFG-WPCL	L-052002a-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	05/15/2002	SM 2540 C	DFG-WPCL	L-051702-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	05/17/2002	SM 2540 C	DFG-WPCL	L-052002b-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	05/23/2002	SM 2540 C	DFG-WPCL	L-052002c-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	05/24/2002	SM 2540 C	DFG-WPCL	L-053002a-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	05/24/2002	SM 2540 C	DFG-WPCL	L-053002-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	06/11/2002	SM 2540 C	DFG-WPCL	L-061402-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	06/13/2002	SM 2540 C	DFG-WPCL	L-061402a-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	06/17/2002	SM 2540 C	DFG-WPCL	L-061802-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	06/20/2002	SM 2540 C	DFG-WPCL	L-062102-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	06/21/2002	SM 2540 C	DFG-WPCL	L-062502-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	06/21/2002	SM 2540 C	DFG-WPCL	L-070302-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	06/21/2002	SM 2540 C	DFG-WPCL	L-070102-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	06/27/2002	SM 2540 C	DFG-WPCL	L-070302a-TDS
Total Dissolved Solids	-88	mg/L	10	10	DNQ	06/28/2002	SM 2540 C	DFG-WPCL	L-070502-TDS
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	03/02/2002	EPA 351.3	DFG-WPCL	L-030702-TKN
Total Kjeldahl Nitrogen	0.344	mg/L	0.25	0.5	DNQ	03/06/2002	EPA 351.3	DFG-WPCL	L-030602-TKN

Table A.3 (cont'd). Laboratory method blanks in which analytes were detected

Analyte	Result	Units	MDL	RL	Detected	Analysis Date	Method Name	Laboratory	Batch ID
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	03/08/2002	EPA 351.3	DFG-WPCL	L-030802-TKN
Total Kjeldahl Nitrogen l	-88	mg/L	0.25	0.5	DNQ	03/08/2002	EPA 351.3	DFG-WPCL	L-030802a-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	03/16/2002	EPA 351.3	DFG-WPCL	L-031602-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	03/25/2002	EPA 351.3	DFG-WPCL	L-032502-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	03/26/2002	EPA 351.3	DFG-WPCL	L-032602-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	03/28/2002	EPA 351.3	DFG-WPCL	L-032802a-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	03/28/2002	EPA 351.3	DFG-WPCL	L-032802-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	03/29/2002	EPA 351.3	DFG-WPCL	L-040802-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	03/29/2002	EPA 351.3	DFG-WPCL	L-040902-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	04/05/2002	EPA 351.3	DFG-WPCL	L-040502a-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	04/05/2002	EPA 351.3	DFG-WPCL	L-040502-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	04/05/2002	EPA 351.3	DFG-WPCL	L-040902a-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	04/12/2002	EPA 351.3	DFG-WPCL	L-041602-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	04/15/2002	EPA 351.3	DFG-WPCL	L-041502-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	04/24/2002	EPA 351.3	DFG-WPCL	L-042402-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	05/02/2002	EPA 351.3	DFG-WPCL	L-050202a-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	05/02/2002	EPA 351.3	DFG-WPCL	L-050202-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	05/03/2002	EPA 351.3	DFG-WPCL	L-050302-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	05/03/2002	EPA 351.3	DFG-WPCL	L-051302-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	05/03/2002	EPA 351.3	DFG-WPCL	L-051502a-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	05/03/2002	EPA 351.3	DFG-WPCL	L-051502-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	05/10/2002	EPA 351.3	DFG-WPCL	L-051002-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	05/14/2002	EPA 351.3	DFG-WPCL	L-052002-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	05/17/2002	EPA 351.3	DFG-WPCL	L-051702-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	05/20/2002	EPA 351.3	DFG-WPCL	L-052002a-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	05/20/2002	EPA 351.3	DFG-WPCL	L-052002b-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	05/22/2002	EPA 351.3	DFG-WPCL	L-052002c-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	05/23/2002	EPA 351.3	DFG-WPCL	L-053002-TKN

Table A.3 (cont'd). Laboratory method blanks in which analytes were detected

Analyte	Result	Units	MDL	RL	Detected	Analysis Date	Method Name	Laboratory	Batch ID
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	05/29/2002	EPA 351.3	DFG-WPCL	L-053002a-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	06/12/2002	EPA 351.3	DFG-WPCL	L-061402-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	06/14/2002	EPA 351.3	DFG-WPCL	L-061402a-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	06/18/2002	EPA 351.3	DFG-WPCL	L-061802-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	06/21/2002	EPA 351.3	DFG-WPCL	L-062102-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	06/25/2002	EPA 351.3	DFG-WPCL	L-062502-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	06/27/2002	EPA 351.3	DFG-WPCL	L-070102-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	07/03/2002	EPA 351.3	DFG-WPCL	L-070302a-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	07/03/2002	EPA 351.3	DFG-WPCL	L-070302-TKN
Total Kjeldahl Nitrogen	-88	mg/L	0.25	0.5	DNQ	07/05/2002	EPA 351.3	DFG-WPCL	L-070502-TKN
Total Kjeldahl Nitrogen	0.49	mg/L	0.3	0.5	DNQ	10/21/2002	EPA 351.3	DFG-WPCL	102102-TKN
Total Kjeldahl Nitrogen	0.49	mg/L	0.3	0.5	DNQ	10/21/2002	EPA 351.3	DFG-WPCL	102102-TKN
Total Kjeldahl Nitrogen	0.46	mg/L	0.3	0.5	DNQ	10/25/2002	EPA 351.3	DFG-WPCL	102502-TKN-1
Total Kjeldahl Nitrogen	0.31	mg/L	0.3	0.5	DNQ	10/25/2002	EPA 351.3	DFG-WPCL	102502-TKN-2
Total Kjeldahl Nitrogen	0.34	mg/L	0.3	0.5	DNQ	11/01/2002	EPA 351.3	DFG-WPCL	110102-TKN
Total Kjeldahl Nitrogen	0.3	mg/L	0.3	0.5	DNQ	12/06/2002	EPA 351.3	DFG-WPCL	120602-TKN
Total Mercury	0.155	ng/L	0.144	0.432	DNQ	12/12/2003	EPA 1631EM	Battelle	Bat121203
Zinc	0.032	µg/L	0.02	0.05	DNQ	03/27/2002	EPA 1638M	MPSL-DFG	R1-32702-ICP
Zinc	0.024	µg/L	0.02	0.06	DNQ	07/15/2003	EPA 1638M	MPSL-DFG	ICP071503a
Zinc	0.026	µg/L	0.02	0.06	DNQ	07/16/2003	EPA 1638M	MPSL-DFG	ICP071603

Table A.4. Batches for which no matrix spikes or matrix spike duplicates were run.

Analyte	Batch ID	Notes	Laboratory
Alkalinity as CaCO3	041403-ALK-1	QAO: no MS/MSD	DFG-WPCL
Alkalinity as CaCO3	061103-ALK	QAO: no MS/MSD	DFG-WPCL
BTEX	L-060702-BTEX	QAO: no MS/MSD	DFG-WPCL
BTEX	L-061002-BTEX	QAO: no MS/MSD	DFG-WPCL
BTEX	L-061402-BTEX	QAO: no MS/MSD	DFG-WPCL
Chloride	111502-CL	QAO: no MS/MSD	DFG-WPCL
Chloride	112002-CL	QAO: no MS/MSD	DFG-WPCL
Fluoride	111502-F	QAO: no MS/MSD	DFG-WPCL
Fluoride	112002-F	QAO: no MS/MSD	DFG-WPCL
Hardness	042303-HARD	QAO: not enough QC, more than 20 samples in batch	DFG-WPCL
Methyl-t-butyl ether	L-060403-MtBE	QAO: no MS/MSD	DFG-WPCL
Methyl-t-butyl ether	L-060503-MtBE	QAO: no MS/MSD	DFG-WPCL
Methyl-t-butyl ether	L-060603-MtBE	QAO: no MS/MSD	DFG-WPCL
Methyl-t-butyl ether	L-060903-MtBE	QAO: no MS/MSD	DFG-WPCL
Miscellaneous Pesticides	L-061603-MISC	QAO: no MS/MSD	DFG-WPCL
Nitrate as N	061103-NO3	QAO: no MS/MSD	DFG-WPCL
OCH Pesticides	L-021003-OCH	QAO: no MS/MSD on 2/10, no QC for 2/17	DFG-WPCL
OCH Pesticides	L-022403-OCH	QAO: no MS/MSD for 2/25	DFG-WPCL
OCH Pesticides	L-040102-OCH	QAO: no MS/MSD for 3/25, no MS/MSD for 3/30	DFG-WPCL
OCH Pesticides	L-041403-OCH	QAO: no QC samples for 4/12	DFG-WPCL
OCH Pesticides	L-041903-OCH	QAO: no QC for 4/18 and 4/22, no MS/MSD for 4/21	DFG-WPCL
OCH Pesticides	L-042503-OCH	QAO: no QC for 4/25	DFG-WPCL
OCH Pesticides	L-051402-OCH	QAO: no MS/MSD	DFG-WPCL
OCH Pesticides	L-060503-OCH	QAO: no QC for 6/5, no MS/MSD for 6/15	DFG-WPCL
OCH Pesticides	L-061502-OCH	QAO: no MS/MSD for 6/8 and 6/14	DFG-WPCL
OCH Pesticides	L-121302-OCH	QAO: no MS/MSD for 11/25	DFG-WPCL
OCH Pesticides	L-12302-OCH	QAO: no QC for 10/12 and 10/28	DFG-WPCL
OP Pesticides	L-021003-OP	QAO: no MS/MSD for 2/10	DFG-WPCL
OP Pesticides	L-022403-OP	QAO: no QC for 2/25	DFG-WPCL
OP Pesticides	L-031702-OPP	QAO: not enough QC, more than 20 samples in batch	DFG-WPCL
OP Pesticides	L-032703-OP	QAO: no MS/MSD for 3/27	DFG-WPCL
OP Pesticides	L-041403-OP	QAO: no QC for 4/12 and 4/22	DFG-WPCL
OP Pesticides	L-041903-OP	QAO: no QC for 4/18, no MS/MSD for 4/21	DFG-WPCL
OP Pesticides	L-042603-OP	QAO: no QC for 4/25 and 4/26	DFG-WPCL
OP Pesticides	L-051702-OPP	QAO: no MS/MSD	DFG-WPCL
OP Pesticides	L-060503-OP	QAO: no QC for 6/5	DFG-WPCL

Table A.4 (cont'd). Batches for which no matrix spikes or matrix spike duplicates were run.

Analyte	Batch ID	Notes	Laboratory
OP Pesticides	L-062002-OPP	QAO: no MS/MSD	DFG-WPCL
OP Pesticides	L-070602-OPP	QAO: no MS/MSD for 6/26 and 6/30	DFG-WPCL
OP Pesticides	L-110202-OP	QAO: no MS/MSD for 10/12, no QC for 10/28	DFG-WPCL
OP Pesticides	L-121302-OP	QAO: no MS/MSD for 11/25	DFG-WPCL
Phenols	L-030503-PCP-TCP	QAO: no MS/MSD	DFG-WPCL
Phenols	L-031102-PCP	QAO: no MS/MSD for 3/2	DFG-WPCL
Phenols	L-070602-PCP	QAO: no MS/MSD for 6/14 and no QC for 6/30/2002	DFG-WPCL
PCBs	L-031702-PCB	QAO: not enough QC, more than 20 samples in batch	DFG-WPCL
PCBs	L-040102-PCB	QAO: no MS/MSD for 3/30	DFG-WPCL
PCBs	L-041403-PCB	QAO: no QC for 4/12	DFG-WPCL
PCBs	L-041903-PCB	QAO: no QC for 4/19	DFG-WPCL
PCBs	L-042503-PCB	QAO: no QC for 4/25	DFG-WPCL
PCBs	L-051402-PCB	QAO: no MS/MSD	DFG-WPCL
PCBs	L-060503-PCB	QAO: no QC for 6/5	DFG-WPCL
PCBs	L-061502-PCB	QAO: no MS/MSD	DFG-WPCL
PCBs	L-071902-PCB	QAO: no MS/MSD for 6/22 and 6/30	DFG-WPCL
PCBs	L-120302-PCB	QAO: no QC for 10/12 and 10/28	DFG-WPCL
PCBs	L-121302-PCB	QAO: no MS/MSD for 11/25	DFG-WPCL
Sulfate	111502-SO4	QAO: no MS/MSD	DFG-WPCL
Sulfate	112002-SO4	QAO: no MS/MSD	DFG-WPCL
Surfactants	L-021003-SURF	QAO: no MS/MSD 2/10, no QC for 2/14	DFG-WPCL
Surfactants	L-022103-SURF	QAO: no QC 2/24	DFG-WPCL
Surfactants	L-042103-SURF	QAO: no QC for 4/23 and 4/28	DFG-WPCL
Surfactants	L-061703-SURF	QAO: no QC for 6/23	DFG-WPCL
Total Kjeldahl Nitrogen	022603-TKN	QAO: not enough QC, more than 20 samples in batch	DFG-WPCL
Total Kjeldahl Nitrogen	022603-TKN-1	QAO: no MS/MSD	DFG-WPCL
Total Kjeldahl Nitrogen	061303-TKN	QAO: no MS/MSD	DFG-WPCL
Total Mercury	Hg080403	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Mercury	R1-012903-Hg	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Mercury	R1-021803-Hg	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Mercury	t021204	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Mercury	t021704	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG

Table A.4 (cont'd). Batches for which no matrix spikes or matrix spike duplicates were run.

Analyte	Batch ID	Notes	Laboratory
Total Mercury	t051503	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Metals	ICP020603	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Metals	ICP032703	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Metals	ICP042903	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Metals	ICP071503b	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Metals	R1-101102-ICP	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Metals	R1-53002-ICP	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Phosphorus	041703-TPHOS-2	QAO: no MS/MSD	DFG-WPCL
Total Phosphorus	061303-TPHOS	QAO: no MS/MSD	DFG-WPCL
Triazine Pesticides	L-041403-TRIAZ	QAO: no QC for 4/12 and 4/22	DFG-WPCL
Triazine Pesticides	L-041903-TRIAZ	QAO: no QC for 4/18 and 4/21	DFG-WPCL
Triazine Pesticides	L-042603-TRIAZ	QAO: no MS/MSD for 4/26 and 4/28	DFG-WPCL
Triazine Pesticides	L-110202-TRIAZ	QAO: no MS/MSD for 10/12 and 10/28	DFG-WPCL

Table A.5. Matrix spikes (MS), matrix spike duplicates (MSD), %Rs and RPDs that did not meet specified criteria. Grey cells indicates values that did not meet quality control criteria.

Analyte	Site	Sample Date	Lab Batch ID	MS %R	MSD %R	RPD	Laboratory
Alkalinity as CaCO3	106TRINFH	9-Feb-03	022003-ALK	82.9	107.8	26.12	DFG-WPCL
Alkalinity as CaCO3	204SMA020	22-Apr-03	050503-ALK	91.3	65.22	33.33	DFG-WPCL
Aluminum	111ELDRCR	5-Feb-02	R1-22202-ICP	123.6	126.6	2.36	MPSL-DFG
Aluminum	111VANBRG	26-Feb-02	R1-30502-ICP	-53.99	-107.98	0	MPSL-DFG
Aluminum	109MADRUT	20-Mar-02	R1-32702-ICP	144.67	128.6	11.76	MPSL-DFG
Aluminum	106TRINFH	8-Apr-02	R1-53002-ICP	128.92	128.92	0	MPSL-DFG
Aluminum	204SMA020	22-Apr-03	ICP071503b	140	140	0.012	MPSL-DFG
Ametryn	107RDWDOR	10-Jun-03	L-060503-TRIAZ	80	61	26.95	DFG-WPCL
Arsenic	111EELMDV	21-Mar-02	R1-32702-ICP	108.3	186.3	52.96	MPSL-DFG
Aspon	114RRJB01	24-Apr-03	L-042603-OP	102	78.1	76.54	DFG-WPCL

Table A.5 (cont'd). Matrix spikes (MS), matrix spike duplicates (MSD), %Rs and RPDs that did not meet specified criteria. Grey cells indicates values that did not meet quality control criteria.

Analyte	Site	Sample Date	Lab Batch ID	MS %R	MSD %R	RPD	Laboratory
Azinphos methyl	105SCOTCA	10-Apr-03	L-041403-OP	75.4	110	37.32	DFG-WPCL
Azinphos methyl	106TRINSL	10-Jun-03	L-061603-OP	69.9	91	26.23	DFG-WPCL
Azinphos methyl	105YREAND	18-Jun-03	L-060503-OP	70	91	26.09	DFG-WPCL
Cadmium	111VAN101	13-Jun-02	R1-100202-ICP	126.09	117.39	7.14	MPSL-DFG
Carbophenothion	114RRTAL1	19-Jun-03	L-062303-OP	67.2	90.8	29.87	DFG-WPCL
cis Chlordane	901SJALC6	29-Oct-02	L-121302-OCH	93.3	62	40.3	DFG-WPCL
trans Chlordane	901SJALC6	29-Oct-02	L-121302-OCH	68.8	93.9	30.85	DFG-WPCL
alpha Chlordene	901SJALC6	29-Oct-02	L-121302-OCH	61.1	101	49.22	DFG-WPCL
gamma Chlordene	904CBSAM3	12-Mar-02	L-031702-OCH	90	126	33.33	DFG-WPCL
gamma Chlordene	114RRTAL1	17-Apr-02	L-050202-OCH	125	72.2	53.55	DFG-WPCL
Chloride	105KLARMP	8-Oct-02	101802-CL	150.98	115.69	26.47	DFG-WPCL
Chloride	103SMHFIS	4-Feb-03	020603-CL	125.93	137.04	8.45	DFG-WPCL
Chloride	106TRHTCH	10-Feb-03	021303-CL	128.95	134.21	4	DFG-WPCL
Chloride	105SCOTJB	11-Feb-03	021303-CL-1	76.67	76.67	0	DFG-WPCL
Chloride	105KLASTL	12-Feb-03	021403-CL	235.71	207.14	12.9	DFG-WPCL
Chloride	111EELBRN	19-Feb-03	022103-CL	113.04	139.13	20.69	DFG-WPCL
Chloride	111EELVAN	16-Jun-03	070103-CL	129.03	119.35	7.79	DFG-WPCL
methyl Chlorpyrifos	202SGR080	18-Jun-02	L-070602-OPP	112	69	47.51	DFG-WPCL
Chromium	111ELDRCR	5-Feb-02	R1-22202-ICP	171.8	172.1	0.17	MPSL-DFG
Chromium	103SMHMAN	15-Oct-02	ICP020603	88.2	70.9	21.38	MPSL-DFG
Copper	111ELDRCR	5-Feb-02	R1-22202-ICP	134	131.6	1.81	MPSL-DFG
Dacthal	901SJALC6	29-Oct-02	L-121302-OCH	80	112	33.33	DFG-WPCL
(o,p') DDT	107RDWDOR	15-Oct-02	L-12302-OCH	85	110	25.64	DFG-WPCL
(p,p') DDT	111EELVAN	17-Feb-03	L-022403-OCH	80	113	34.2	DFG-WPCL
Diazinon	106TRINSL	10-Jun-03	L-061603-OP	76.9	102	28.06	DFG-WPCL
Diazinon	105YREAND	18-Jun-03	L-060503-OP	77	102	27.93	DFG-WPCL

Table A.5 (cont'd). Matrix spikes (MS), matrix spike duplicates (MSD), %Rs and RPDs that did not meet specified criteria. Grey cells indicates values that did not meet quality control criteria.

Analyte	Site	Sample Date	Lab Batch ID	MS %R	MSD %R	RPD	Laboratory
Dichlorvos	114RRJB01	17-Apr-02	L-050902-OPP	74.5	114	41.91	DFG-WPCL
Dicrotophos	105SCOTCA	10-Apr-03	L-041403-OP	70.2	94.9	29.92	DFG-WPCL
Dimethoate	114RRJB01	24-Apr-03	L-042603-OP	74.2	108	37.1	DFG-WPCL
Dioxathion	202SGR080	18-Jun-02	L-070602-OPP	110	67	48.59	DFG-WPCL
Dioxathion	901SJENG2	28-Oct-02	L-110202-OP	89.5	116	25.79	DFG-WPCL
Endosulfan II	107RDWDOR	15-Oct-02	L-12302-OCH	110	83.3	27.63	DFG-WPCL
Ethion	901SJENG2	28-Oct-02	L-110202-OP	110	77	35.29	DFG-WPCL
Ethoprop	105SCOTCA	10-Apr-03	L-041403-OP	73.3	105	35.52	DFG-WPCL
Fenchlorphos	202SGR080	18-Jun-02	L-070602-OPP	119	70.5	51.19	DFG-WPCL
Fenitrothion	901SJENG2	28-Oct-02	L-110202-OP	70.5	94	28.57	DFG-WPCL
Fensulfothion	103SMHMAN	25-Mar-02	L-040102-OPP	109	79.2	31.67	DFG-WPCL
Fensulfothion	202SGR080	18-Jun-02	L-070602-OPP	107.8	82.7	25.62	DFG-WPCL
Fensulfothion	114RRJB01	24-Apr-03	L-042603-OP	101	75.2	29.28	DFG-WPCL
alpha HCH	901SJALC6	29-Oct-02	L-121302-OCH	94	72.5	25.83	DFG-WPCL
delta HCH	114RRHMB1	19-Jun-03	L-060503-OCH	0	8	200	DFG-WPCL
delta HCH	114RRTAL1	19-Jun-03	L-060503-OCH	8	8	0	DFG-WPCL
gamma HCH	114RRTAL1	17-Apr-02	L-050202-OCH	90	56.3	53.84	DFG-WPCL
Manganese	727CRRMD4	9-May-02	R7-091302-ICP	163	97	52.31	MPSL-DFG
Methidathion	111EELVAN	6-Feb-02	L-021602-OPP	87.1	118	30.13	DFG-WPCL
MTBE	111LKPL01	17-Oct-01	L-102601-BTEX	136	78.4	53.78	DFG-WPCL
MTBE	111LKPL01	30-May-02	L-061302-BTEX	156.7	63.1	85.16	DFG-WPCL
Naled	202SGR080	18-Jun-02	L-070602-OPP	90	120	28.57	DFG-WPCL
Naled	106TRINFH	9-Feb-03	L-021003-OP	73.5	105	35.29	DFG-WPCL
Naled	106TRINSL	10-Jun-03	L-061603-OP	78.9	117	38.9	DFG-WPCL
Naled	105YREAND	18-Jun-03	L-060503-OP	79	117	38.78	DFG-WPCL
Naled	114RRTAL1	19-Jun-03	L-062303-OP	61.2	82.6	29.76	DFG-WPCL

Table A.5 (cont'd). Matrix spikes (MS), matrix spike duplicates (MSD), %Rs and RPDs that did not meet specified criteria. Grey cells indicates values that did not meet quality control criteria.

Analyte	Site	Sample Date	Lab Batch ID	MS %R	MSD %R	RPD	Laboratory
Nitrate as N	105SCOTJB	11-Feb-03	021303-NO3	86.21	75.86	12.77	DFG-WPCL
Nitrate as N	105SHAMON	8-Apr-03	041003-NO3	121.57	105.88	13.79	DFG-WPCL
Nitrate as N	715CRIDU1	9-Apr-03	041003-NO3	128.57	130.95	1.83	DFG-WPCL
Nitrate as N	109MADBLU	10-Jun-03	061203-NO3	79.32	89.24	11.76	DFG-WPCL
Nitrate as N	106TRINHP	11-Jun-03	061303-NO3	116.95	121.13	3.51	DFG-WPCL
Nitrate as N	105KLASTL	18-Jun-03	062303-NO3-1	76.92	88.46	13.95	DFG-WPCL
Nitrite as N	905SDYSA7	17-Apr-03	041803-NO2	78.65	85.42	8.25	DFG-WPCL
Nonylphenolethoxylate	114RRCLO1	23-Oct-02	L-110202-SURF	115	81.2	34.45	DFG-WPCL
Nonylphenolethoxylate	105SCOTJB	11-Feb-03	L-021003-SURF	99.9	72.7	31.52	DFG-WPCL
Orthophosphate as P	105SHAEDG	7-Oct-02	100902-OPO4	92.31	76.92	18.18	DFG-WPCL
Orthophosphate as P	105KLARMP	8-Oct-02	101002-OPO4	137.5	150	8.7	DFG-WPCL
Orthophosphate as P	105SHA263	9-Oct-02	101102-OPO4	133.33	100	28.57	DFG-WPCL
Orthophosphate as P	111ELDRCR	17-Jun-03	061903-OPO4	123.71	164.43	28.26	DFG-WPCL
Oxadiazon	114RRTAL1	17-Apr-02	L-050202-OCH	120	82.7	36.8	DFG-WPCL
PCB 008	114RRHMB1	6-Feb-02	L-021602-PCB	116	86.3	29.36	DFG-WPCL
PCB 008	103SMHSFK	25-Feb-02	L-031102-PCB	114	85.9	28.11	DFG-WPCL
PCB 044	906LPSOL2	13-Mar-02	L-031702-PCB	110	84.7	25.99	DFG-WPCL
PCB 074	103SMHSFK	25-Feb-02	L-031102-PCB	107	76.9	32.74	DFG-WPCL
PCB 095	114RRTAL1	17-Apr-02	L-050202-PCB	83.5	109	26.49	DFG-WPCL
PCB 101	103SMHSFK	25-Feb-02	L-031102-PCB	102	69.3	38.18	DFG-WPCL
PCB 101	114RRTAL1	17-Apr-02	L-050202-PCB	83.3	109	26.73	DFG-WPCL
PCB 158	114RRTAL1	17-Apr-02	L-050202-PCB	71.4	93.3	26.59	DFG-WPCL
Phorate	202SGR080	18-Jun-02	L-070602-OPP	65.3	106	47.52	DFG-WPCL
Total Phosphorus as P	111EELBRN	23-Apr-03	050103-TPHOS	78.38	77.58	1.03	DFG-WPCL
Total Phosphorus as P	109MADBLU	10-Jun-03	061603-TPHOS	87.2	79.2	9.62	DFG-WPCL
Selenium	106TRINFH	8-Apr-02	R1-53002-ICP	997.1	987.1	1.01	MPSL-DFG

Table A.5 (cont'd). Matrix spikes (MS), matrix spike duplicates (MSD), %Rs and RPDs that did not meet specified criteria. Grey cells indicates values that did not meet quality control criteria.

Analyte	Site	Sample Date	Lab Batch ID	MS %R	MSD %R	RPD	Laboratory
Selenium	106TRINPB	14-May-02	R1-70302-ICP	95	133	33.33	MPSL-DFG
Selenium	111EELHST	24-Jun-02	R1-100202-ICP	107.11	128.89	18.46	MPSL-DFG
Silver	103SMHFIS	9-Jun-03	ICP101603	75	72	3.72	MPSL-DFG
Silver	111VAN101	13-Jun-02	R1-100202-ICP	65.6	67.6	3	MPSL-DFG
Sulfate	106TRHTCH	4-Nov-02	111202-SO4	80.61	79.59	1.27	DFG-WPCL
Sulfate	111EELHOL	22-Apr-03	050703-SO4-1	213.33	200	6.45	DFG-WPCL
Terbufos	202SGR080	18-Jun-02	L-070602-OPP	57.1	100	54.61	DFG-WPCL
Tetrachlorvinphos	111EELVAN	17-Feb-03	L-022403-OP	106	78.9	29.31	DFG-WPCL
Tetrachlorvinphos	105SCOTCA	10-Apr-03	L-041403-OP	74.7	110	38.22	DFG-WPCL
Thiobencarb	103SMHMAN	25-Feb-02	L-031002-OPP	119	82	36.82	DFG-WPCL
Total Mercury	111EELBRN	5-Feb-02	R1-022702-Hg	73.7	80.7	9.07	MPSL-DFG
Total Mercury	106TRINWP	13-Nov-02	t051903	115.5	86.5	28.71	MPSL-DFG

Table A.6. Batches for which no CRM, LCM, or LCS were run.

Analyte	Batch ID	Notes	Laboratory
Alkalinity as CaCO3	112102-ALK	QAO: not enough QC (blank and CRM) more than 20 samples in batch	DFG-WPCL
BTEX	L-050702-BTEX	QAO: no LCS, CRM	DFG-WPCL
BTEX	L-050902-BTEX	QAO: no LCS, CRM	DFG-WPCL
BTEX	L-060702-BTEX	QAO: no LCS, CRM	DFG-WPCL
BTEX	L-061002-BTEX	QAO: no LCS, CRM	DFG-WPCL
BTEX	L-061302-BTEX	QAO: no LCS, CRM	DFG-WPCL
BTEX	L-061402-BTEX	QAO: no LCS, CRM	DFG-WPCL
BTEX	L-102401-BTEX	QAO: no LCS, CRM	DFG-WPCL
BTEX	L-102601-BTEX	QAO: no LCS, CRM	DFG-WPCL
Chloride	062603-CL	QAO: no CRM	DFG-WPCL
Hardness as CaCO3	042303-HARD	QAO: not enough QC samples, more than 20 samples in batch	DFG-WPCL
OCH Pesticides	L-021003-OCH	QAO: no for 2/17	DFG-WPCL
OCH Pesticides	L-022403-OCH	QAO: no LCS for 2/25	DFG-WPCL

Table A.6 (cont'd). Batches for which no CRM, LCM, or LCS were run.

Analyte	Batch ID	Notes	Laboratory
OCH Pesticides	L-040102-OCH	QAO: no LCS for 3/29 and 3/30	DFG-WPCL
OCH Pesticides	L-041403-OCH	QAO: no QC for 4/12	DFG-WPCL
OCH Pesticides	L-041903-OCH	QAO: no QC for 4/18 and 4/22 no LCS for 4/19	DFG-WPCL
OCH Pesticides	L-042503-OCH	QAO: no QC for 4/25	DFG-WPCL
OCH Pesticides	L-051402-OCH	QAO: no LCS	DFG-WPCL
OCH Pesticides	L-060503-OCH	QAO: no QC for 6/5, no LCS for 6/15	DFG-WPCL
OCH Pesticides	L-061502-OCH	QAO: no LCS for 6/14	DFG-WPCL
OCH Pesticides	L-121302-OCH	QAO: no LCS for 11/25	DFG-WPCL
OCH Pesticides	L-12302-OCH	QAO: no QC for 10/12 and 10/28	DFG-WPCL
OP Pesticides	L-021003-OP	QAO: no LCS for 2/17	DFG-WPCL
OP Pesticides	L-022403-OP	QAO: no QC for 2/25	DFG-WPCL
OP Pesticides	L-031702-OPP	QAO: not enough QC, more than 20 samples in the batch	DFG-WPCL
OP Pesticides	L-032703-OP	QAO: no LCS for 3/27	DFG-WPCL
OP Pesticides	L-041403-OP	QAO: no QC samples for 4/12 and 4/22	DFG-WPCL
OP Pesticides	L-041903-OP	QAO: no QC for 4/18, no LCS for 4/19	DFG-WPCL
OP Pesticides	L-042603-OP	QAO: no QC for 4/25 and 4/26	DFG-WPCL
OP Pesticides	L-051702-OPP	QAO: no LCS	DFG-WPCL
OP Pesticides	L-060503-OP	QAO: no QC for 6/5	DFG-WPCL
OP Pesticides	L-062002-OPP	QAO: no LCS	DFG-WPCL
OP Pesticides	L-070602-OPP	QAO: no LCS for 6/22 and 6/26	DFG-WPCL
OP Pesticides	L-110202-OP	QAO: no LCS for 10/12, no QC for 10/28	DFG-WPCL
OP Pesticides	L-121302-OP	QAO: no LCS for 11/25	DFG-WPCL
PCBs	L-031702-PCB	QAO: not enough QC, more than 20 samples in batch	DFG-WPCL
PCBs	L-040102-PCB	QAO: no LCS for 3/29 and 3/30	DFG-WPCL
PCBs	L-041403-PCB	QAO: no QC for 4/12	DFG-WPCL
PCBs	L-041903-PCB	QAO: no QC for 4/19	DFG-WPCL
PCBs	L-042503-PCB	QAO: no QC for 4/25 LCS from 5/5 not needed	DFG-WPCL
PCBs	L-051402-PCB	QAO: no LCS	DFG-WPCL
PCBs	L-060503-PCB	QAO: no QC for 6/5	DFG-WPCL
PCBs	L-061502-PCB DFG-WPCL	QAO: no LCS for 6/14	DFG-WPCL
PCBs	L-071902-PCB	QAO: no LCS for 6/26 and 6/30	DFG-WPCL
PCBs	L-120302-PCB	QAO: no QC for 10/12 and 10/28	DFG-WPCL

Table A.6 (cont'd). Batches for which no CRM, LCM, or LCS were run.

Analyte	Batch ID	Notes	Laboratory
PCBs	L-121302-PCB	QAO: no LCS for 11/25	DFG-WPCL
Phenols	L-031102-PCP	QAO: no LCS for 3/2	DFG-WPCL
Phenols	L-070602-PCP	QAO: no QC for 6/30	DFG-WPCL
Sulfate	062603-SO4	QAO: no CRM	DFG-WPCL
Surfactants	L-021003-SURF	QAO: no LCS for 2/10, no QC for 2/14	DFG-WPCL
Surfactants	L-022103-SURF	QAO: no QC 2/24	DFG-WPCL
Surfactants	L-042103-SURF	QAO: no QC for 4/23 and 4/28	DFG-WPCL
Surfactants	L-061703-SURF	QAO: no QC for 6/23	DFG-WPCL
Total Dissolved Solids	021903-TDS	QAO: no CRM	DFG-WPCL
Total Kjeldahl Nitrogen	022603-TKN	QAO: not enough QC, more than 20 samples in batch	DFG-WPCL
Total Mercury	Hg080403	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Mercury	R1-012903-Hg	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Mercury	R1-021803-Hg	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Mercury	t021204	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Mercury	t021704	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Mercury	t051503	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Metals	ICP020603	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Metals	ICP032703	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Metals	ICP042903	QAO: not enough QC more than 20 samples in batch	MPSL-DFG
Total Metals	ICP071503b	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Metals	ICP101603	QAO: not enough QC in batch (blanks or CRMs)	MPSL-DFG
Total Metals	R1-101102-ICP	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Metals	R1-70302-ICP	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG

Table A.6 (cont'd). Batches for which no CRM, LCM, or LCS were run.

Analyte	Batch ID	Notes	Laboratory
Triazine Pesticides	L-041403-TRIAZ	QAO: no QC for 4/12 and 4/22	DFG-WPCL
Triazine Pesticides	L-041903-TRIAZ	QAO: no QC for 4/18 and 4/21	DFG-WPCL
Triazine Pesticides	L-042603-TRIAZ	QAO: no LCS for 4/25 and 4/26	DFG-WPCL
Triazine Pesticides	L-110202-TRIAZ	QAO: no LCS for 10/12 and 10/28	DFG-WPCL

Table A.7. Certified reference material (CRM), LCM, and LCS that did not meet quality control acceptance criteria.

Analyte	Sample Type	Batch ID	% Recovery	Laboratory
Aluminum	CRM	R1-100202-ICP	57	MPSL-DFG
Aluminum	CRM	R1-100202-ICP	55	MPSL-DFG
Aluminum	CRM	R1-53102-ICP	60	MPSL-DFG
Aluminum	CRM	R1-80902-ICP	52	MPSL-DFG
Aluminum	CRM	R1-80902-ICP	54	MPSL-DFG
delta HCH	LCS	L-060503-OCH	6	DFG-WPCL
delta HCH	LCS	L-060503-OCH	7	DFG-WPCL
Endosulfan sulfate	LCS	L-060503-OCH	46	DFG-WPCL
Selenium	CRM	R1-100202-ICP	61	MPSL-DFG
Selenium	CRM	R1-30502-ICP	71	MPSL-DFG
Selenium	CRM	R1-30502-ICP	64	MPSL-DFG
Selenium	CRM	R1-70302-ICP	46	MPSL-DFG
Selenium	CRM	R1-70302-ICP	54	MPSL-DFG
Silver	CRM	R1-30502-ICP	9	MPSL-DFG
Silver	CRM	R1-30502-ICP	-6	MPSL-DFG

Table A.8. Batches for which no Laboratory Duplicates were run.

Analyte	Batch ID	Notes	Laboratory
Chlorophyll a	CHL02-0002	QAO: no DUP	MPSL-DFG
Chlorophyll a	CHL03-0003	QAO: no DUP	MPSL-DFG
Chlorophyll a	Chl03-0013	QAO: no DUP	MPSL-DFG
Chlorophyll a	Chl03-0021	QAO: need another DUP	MPSL-DFG
Chlorophyll a	Chl03-0022c	QAO: no DUP	MPSL-DFG
Hardness as CaCO3	042303-HARD	QAO: not enough QC, more than 20 samples in batch	DFG-WPCL
Total Dissolved Solids	021103-TDS	QAO: no DUP	DFG-WPCL
Total Mercury	Hg080403	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Mercury	R1-012903-Hg	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Mercury	R1-021803-Hg	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Mercury	t021204	QAO: not enough QC, more than 20 samples in batch	DFG-WPCL

Table A.8 (cont'd). Batches for which no Laboratory Duplicates were run.

Analyte	Batch ID	Notes	Laboratory
Total Mercury	t021704	QAO: not enough QC, more than 20 samples in batch	DFG-WPCL
Total Mercury	t051503	QAO: not enough QC, more than 20 samples in batch	DFG-WPCL
Total Metals	ICP020603	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Metals	ICP032703	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Metals	ICP042903	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Metals	ICP071503b	QAO: not enough QC, more than 20 samples in batch	DFG-WPCL
Total Metals	R1-101102-ICP	QAO: not enough QC, more than 20 samples in batch	MPSL-DFG
Total Organic Carbon	AMS6402-1	QAO: no DUP	AMS

Table A.9. Laboratory Duplicates (DUPs) that did not meet quality control acceptance criteria.

Analyte	Site	Parent Value	Duplicate Value	Units	RPD	Laboratory	Batch ID
Benzene	109RLK001	-0.04	0.044	µg/L	200	DFG-WPCL	L-060702-BTEX
Cadmium	105KLAMCO	-0.002	0.002	µg/L	200	MPSL-DFG	ICP032703
Cadmium	106TRINSF	0.01	-0.002	µg/L	200	MPSL-DFG	R1-53002-ICP
Ethylbenzene	100WASHBL	-0.041	0.081	µg/L	200	DFG-WPCL	L-050702-BTEX
m/p-Xylenes	109RLK002	-0.043	0.052	µg/L	200	DFG-WPCL	L-061002-BTEX
m/p-Xylenes	111LKPL01	-0.043	0.0461	µg/L	200	DFG-WPCL	L-102401-BTEX
m/p-Xylenes	111LKPL02	0.057	-0.043	µg/L	200	DFG-WPCL	L-061002-BTEX
MTBE	111LKPL01	-0.07	0.104	µg/L	200	DFG-WPCL	L-102401-BTEX
Selenium	105KLAEVC	0.111	0.208	µg/L	61	MPSL-DFG	ICP020603
Selenium	105KLAMGL	0.125	0.166	µg/L	28	MPSL-DFG	ICP071503a
Selenium	105SHA263	0.53	0.697	µg/L	27	MPSL-DFG	R1-53102-ICP
Selenium	111EELBRN	-0.1	0.226	µg/L	200	MPSL-DFG	R1-100202-ICP
Selenium	111EELSFK	0.14	0.281	µg/L	67	MPSL-DFG	R1-32702-ICP
Selenium	114RRHMB1	-0.05	0.099	µg/L	200	MPSL-DFG	R1-70302-ICP
Silver	111EELBRN	0.01	0.018	µg/L	57	MPSL-DFG	R1-100202-ICP
Toluene	109RLK002	-0.07	0.079	µg/L	200	DFG-WPCL	L-061002-BTEX
Toluene	111LKPL02	0.071	-0.07	µg/L	200	DFG-WPCL	L-061002-BTEX
Toluene	111LKPL02	0.495	0.701	µg/L	34	DFG-WPCL	L-102401-BTEX

Table A.10. Field Duplicates that did not meet quality control acceptance criteria.

Analyte	Site	Date	Field Sample	Field Duplicate	Units	RPD	Laboratory
Aluminum	111EELBRN	02/05/2002	59.3	38.5	µg/L	42	MPSL-DFG
Aluminum	103SMHFIS	03/24/2002	38.3	60.3	µg/L	45	MPSL-DFG
Aluminum	103SMHFIS	10/14/2002	39.8	7.34	µg/L	138	MPSL-DFG
Ammonia as N	110JACBAY	03/18/2002	0.1	0.07	mg/L	35	DFG-WPCL
Ammonia as N	103SMHFIS	06/19/2002	0.62	0.47	mg/L	28	DFG-WPCL
Ammonia as N	114RRTAL1	11/21/2002	0.057	-0.05	mg/L	200	DFG-WPCL
Arsenic	111ELDRCR	03/12/2002	0.183	0.277	µg/L	41	MPSL-DFG
Arsenic	103SMHFIS	03/24/2002	0.155	0.113	µg/L	31	MPSL-DFG
Arsenic	110JACBAY	05/23/2002	0.327	0.227	µg/L	36	MPSL-DFG
Arsenic	111ELDRCR	04/23/2003	-0.1	0.137	µg/L	200	MPSL-DFG
Arsenic	105KLAMGL	06/10/2003	1.25	0.792	µg/L	45	MPSL-DFG
Benzene	109RLK002	05/31/2002	0.045	0.061	µg/L	30	DFG-WPCL
Cadmium	103SMHFIS	04/07/2002	0.003	-0.002	µg/L	200	MPSL-DFG
Cadmium	103SMHFIS	10/14/2002	0.02	0.005	µg/L	120	MPSL-DFG
Cadmium	113GUAGRP	02/20/2003	0.003	0.008	µg/L	91	MPSL-DFG
Cadmium	111ELDRCR	04/23/2003	0.003	-0.002	µg/L	200	MPSL-DFG
Cadmium	114RRJB01	06/19/2003	0.389	0.035	µg/L	167	MPSL-DFG
Chloride	106TRHTCH	10/06/2002	2.3	1	mg/L	79	DFG-WPCL
Chloride	114RRJB01	06/19/2003	7.22	3.54	mg/L	68	DFG-WPCL
Chlorophyll a	106TRINHP	05/15/2002	1.25	0.75	µg/L	50	SFL
Chlorophyll a	106TRINDC	11/13/2002	0.84	0.51	µg/L	79	MPSL-DFG
Chlorophyll a	113GUAGRP	02/20/2003	0.052	0.088	µg/L	51	MPSL-DFG
Chlorophyll a	103SMHFIS	04/14/2003	0.139	0.107	µg/L	26	MPSL-DFG
Chlorophyll a	111ELDRCR	04/23/2003	0.101	0.051	µg/L	66	MPSL-DFG
Chromium	111ELDRCR	03/12/2002	0.057	0.243	µg/L	124	MPSL-DFG
Chromium	111ELDRCR	04/16/2002	-0.03	0.07	µg/L	200	MPSL-DFG
Chromium	111EELBRN	05/07/2002	0.038	0.055	µg/L	37	MPSL-DFG
Chromium	110JACBAY	05/23/2002	0.931	0.696	µg/L	29	MPSL-DFG
Copper	103SMHFIS	10/14/2002	0.474	0.261	µg/L	58	MPSL-DFG
(p,p') DDE	103SMHFIS	02/24/2002	0.001	-0.001	µg/L	200	DFG-WPCL
Diazinon	103SMHFIS	02/24/2002	-0.005	0.013	µg/L	200	DFG-WPCL
Lead	103SMHFIS	04/07/2002	0.009	0.026	µg/L	97	MPSL-DFG
Lead	103SMHFIS	10/14/2002	0.106	0.023	µg/L	129	MPSL-DFG
Lead	103SMHFIS	02/04/2003	0.015	0.024	µg/L	46	MPSL-DFG
m/p-Xylenes	109RLK001	05/31/2002	0.066	0.099	µg/L	40	DFG-WPCL
m/p-Xylenes	109RLK002	05/31/2002	0.105	0.169	µg/L	47	DFG-WPCL
Manganese	103SMHFIS	10/14/2002	4.09	2.07	µg/L	66	MPSL-DFG
Mercury	111VANBRG	02/26/2002	4.75	6.72	ng/L	34	MPSL-DFG
Mercury	103SMHFIS	04/07/2002	0.4	-0.09	ng/L	200	MPSL-DFG
Mercury	111ELDRCR	04/16/2002	-0.09	0.21	ng/L	200	MPSL-DFG

Table A.10 (cont'd). Field Duplicates that did not meet quality control acceptance criteria.

Analyte	Site	Date	Field Sample	Field Duplicate	Units	RPD	Laboratory
Mercury	103SMHFIS	04/14/2003	1.32	-0.16	ng/L	200	MPSL-DFG
Mercury	111ELDRCR	04/23/2003	1.49	0.54	ng/L	94	MPSL-DFG
MTBE	111LKPL01	05/30/2002	0.119	0.427	µg/L	113	DFG-WPCL
Nickel	111ELDRCR	04/16/2002	0.04	0.03	µg/L	29	MPSL-DFG
Nickel	103SMHFIS	10/14/2002	9.14	6.37	µg/L	36	MPSL-DFG
Nickel	111ELDRCR	04/23/2003	-0.006	0.009	µg/L	200	MPSL-DFG
Nitrate as N	103SMHFIS	04/07/2002	0.066	0.146	mg/L	76	DFG-WPCL
Nonylphenol	103SMHFIS	04/14/2003	0.93	-0.5	µg/L	200	DFG-WPCL
OrthoPhosphate as P	106TRINDC	11/13/2002	0.0115	0.00582	mg/L	66	DFG-WPCL
o-Xylene	109RLK002	05/31/2002	-0.048	0.069	µg/L	200	DFG-WPCL
PCB 052	103SMHFIS	02/24/2002	0.001	-0.001	µg/L	200	DFG-WPCL
Pheophytin a	106TRINHP	05/15/2002	1.25	0.75	µg/L	50	SFL
Selenium	111ELDRCR	03/12/2002	0.265	0.607	µg/L	78	MPSL-DFG
Selenium	110JACBAY	03/18/2002	0.259	0.181	µg/L	36	MPSL-DFG
Selenium	103SMHFIS	03/24/2002	0.112	-0.05	µg/L	200	MPSL-DFG
Selenium	110JACBAY	05/23/2002	0.286	-0.05	µg/L	200	MPSL-DFG
Selenium	103SMHFIS	04/07/2002	0.194	-0.05	µg/L	200	MPSL-DFG
Selenium	111ELDRCR	04/16/2002	-0.05	0.16	µg/L	200	MPSL-DFG
Selenium	111ELDRCR	04/23/2003	-0.1	0.271	µg/L	200	MPSL-DFG
Selenium	105KLAMGL	06/10/2003	1.42	-0.1	µg/L	200	MPSL-DFG
Selenium	114RRJB01	06/19/2003	0.664	0.389	µg/L	52	MPSL-DFG
Silver	110JACBAY	03/18/2002	0.009	0.013	µg/L	36	MPSL-DFG
Silver	109MADBUT	04/22/2002	0.016	-0.008	µg/L	200	MPSL-DFG
Silver	111EELBRN	05/07/2002	0.035	-0.008	µg/L	200	MPSL-DFG
Silver	113GUAGRP	02/20/2003	-0.008	0.014	µg/L	200	MPSL-DFG
Silver	114RRJB01	06/19/2003	-0.008	0.02	µg/L	200	MPSL-DFG
Sulfate	111VANBRG	02/26/2002	0.98	5.67	mg/L	141	DFG-WPCL
Sulfate	114RRJB01	06/19/2003	15.1	7.55	mg/L	67	DFG-WPCL
Toluene	109RLK001	10/18/2001	-0.07	0.0729	µg/L	200	DFG-WPCL
Toluene	109RLK002	10/18/2001	-0.07	0.0758	µg/L	200	DFG-WPCL
Toluene	111LKPL02	05/30/2002	0.071	-0.07	µg/L	200	DFG-WPCL
Toluene	109RLK001	05/31/2002	0.12	0.081	µg/L	39	DFG-WPCL
Toluene	109RLK002	05/31/2002	0.134	0.073	µg/L	59	DFG-WPCL
Total Organic Carbon	103SMHFIS	02/24/2002	8.4	1.6	mg/L	136	AMS
Total Kjeldahl Nitrogen	106TRHTCH	10/06/2002	-0.3	0.692	mg/L	200	DFG-WPCL
Total Kjeldahl Nitrogen	103SMHFIS	02/04/2003	-0.12	0.15	mg/L	200	DFG-WPCL
Total Kjeldahl Nitrogen	105KLAMGL	06/10/2003	0.12	0.16	mg/L	29	DFG-WPCL
Total Kjeldahl Nitrogen	114RRJB01	06/19/2003	0.167	0.24	mg/L	36	DFG-WPCL
Total Organic Carbon	111VANBRG	02/26/2002	5.7	8.2	mg/L	36	AMS

Table A.10 (cont'd). Field Duplicates that did not meet quality control acceptance criteria.

Analyte	Site	Date	Field Sample	Field Duplicate	Units	RPD	Laboratory
Total Organic Carbon	111EELBRN	05/07/2002	2	1.2	mg/L	50	AMS
trans-Chlordane	103SMHFIS	02/24/2002	-0.001	0.001	µg/L	200	DFG-WPCL
Zinc	111EELBRN	02/05/2002	0.25	0.452	µg/L	56	MPSL-DFG
Zinc	111VANBRG	02/26/2002	1.12	0.817	µg/L	31	MPSL-DFG
Zinc	103SMHFIS	04/07/2002	0.061	0.08	µg/L	27	MPSL-DFG
Zinc	106TRINHP	05/15/2002	0.907	0.616	µg/L	38	MPSL-DFG
Zinc	103SMHFIS	10/14/2002	0.803	0.288	µg/L	94	MPSL-DFG
Zinc	111ELDRCR	04/23/2003	0.159	0.224	µg/L	34	MPSL-DFG

Table A.11. Samples with low level (0.36 ± 0.27 mg l^{-1}) Nitrate-N contamination.

Site	Sample Date	Batch ID	Nitrate-N (mg/l)	Method Name
103SMHFIS	03/24/2002	L-040902-NO3	0.13	QC 10107041B
103SMHFIS	04/07/2002	L-041602-NO3	0.146	QC 10107041B
103SMHFIS	04/07/2002	L-041602-NO3	0.066	QC 10107041B
103SMHFIS	05/15/2002	L-052002c-NO3	0.079	QC 10107041B
103SMHFIS	06/19/2002	L-070302-NO3	0.139	QC 10107041B
103SMHFIS	06/19/2002	L-070302-NO3	0.149	QC 10107041B
103SMHFIS	10/14/2002	101602-NO3	0.126	QC 10107041B
103SMHFIS	11/11/2002	111302-NO3	0.0562	QC 10107041B
103SMHFIS	02/04/2003	020703-NO3	0.121	QC 10107041B
103SMHFIS	02/04/2003	020703-NO3	0.114	QC 10107041B
103SMHFIS	04/14/2003	041603-NO3	0.0995	QC 10107041B
103SMHFIS	04/14/2003	041603-NO3	0.126	QC 10107041B
103SMHFIS	06/09/2003	061103-NO3	0.0618	QC 10107041B
103SMHMAN	02/25/2002	L-030702-NO3	0.093	QC 10107041B
103SMHMAN	03/25/2002	L-040902-NO3	0.094	QC 10107041B
103SMHMAN	04/07/2002	L-041602-NO3	0.113	QC 10107041B
103SMHMAN	05/15/2002	L-052002c-NO3	0.092	QC 10107041B
103SMHMAN	06/19/2002	L-070302-NO3	0.087	QC 10107041B
103SMHMAN	10/15/2002	101702-NO3	0.0522	QC 10107041B
103SMHMAN	11/11/2002	111302-NO3	0.0364	QC 10107041B
103SMHMAN	02/04/2003	020703-NO3	0.0441	QC 10107041B
103SMHMAN	04/14/2003	041603-NO3	0.0407	QC 10107041B
103SMHMAN	06/09/2003	061103-NO3	0.0357	QC 10107041B
103SMHSFK	02/25/2002	L-030702-NO3	0.068	QC 10107041B
103SMHSFK	03/25/2002	L-040902-NO3	0.094	QC 10107041B
103SMHSFK	04/07/2002	L-041602-NO3	0.105	QC 10107041B

Table A.11 (cont'd). Samples with low level (0.36 ± 0.27 mg l^{-1}) Nitrate-N contamination.

Site	Sample Date	Batch ID	Nitrate-N	Method Name
103SMHSFK	05/15/2002	L-052002c-NO3	0.093	QC 10107041B
103SMHSFK	06/19/2002	L-070302-NO3	0.087	QC 10107041B
103SMHSFK	10/15/2002	101702-NO3	0.0505	QC 10107041B
103SMHSFK	11/11/2002	111302-NO3	0.0445	QC 10107041B
103SMHSFK	02/04/2003	020703-NO3	0.0462	QC 10107041B
103SMHSFK	04/14/2003	041603-NO3	0.0332	QC 10107041B
103SMHSFK	06/09/2003	061103-NO3	0.0339	QC 10107041B
105KLAEVC	05/13/2002	L-052002a-NO3	0.07	QC 10107041B
105KLAEVC	06/17/2002	L-062502-NO3	0.115	QC 10107041B
105KLAEVC	06/17/2003	062303-NO3	0.146	QC 10107041B
105KLAMCO	04/10/2002	L-042402-NO3	0.137	QC 10107041B
105KLAMCO	05/12/2002	L-051702-NO3	0.148	QC 10107041B
105KLAMCO	06/16/2002	L-062102-NO3	0.124	QC 10107041B
105KLAMGL	10/15/2002	101702-NO3	0.0588	QC 10107041B
105KLAMGL	11/12/2002	111402-NO3	0.135	QC 10107041B
105KLAMGL	04/15/2003	041603-NO3	0.146	QC 10107041B
105KLAMGL	06/10/2003	061203-NO3	0.0552	QC 10107041B
105KLAMGL	06/10/2003	061203-NO3	0.0599	QC 10107041B
105KLAMOR	10/16/2002	101802-NO3	0.0312	QC 10107041B
105KLAMOR	11/13/2002	111502-NO3	0.137	QC 10107041B
105KLAMOR	06/11/2003	061303-NO3	0.0757	QC 10107041B
105KLAMSI	05/13/2002	L-052002a-NO3	0.118	QC 10107041B
105KLAMSI	06/17/2003	062303-NO3	0.117	QC 10107041B
105KLAMWP	04/08/2002	L-041502-NO3	0.109	QC 10107041B
105KLAMWP	05/15/2002	L-052002c-NO3	0.101	QC 10107041B
105KLAMWP	06/18/2002	L-070102-NO3	0.11	QC 10107041B
105KLAMWP	10/16/2002	101802-NO3	0.0339	QC 10107041B
105KLAMWP	11/13/2002	111502-NO3	0.136	QC 10107041B
105KLAMWP	06/11/2003	061303-NO3	0.0475	QC 10107041B
105KLARMP	05/12/2002	L-051702-NO3	0.102	QC 10107041B
105KLARMP	06/16/2002	L-062102-NO3	0.086	QC 10107041B
105KLARMP	06/17/2003	062303-NO3	0.133	QC 10107041B
105SCOTCA	02/27/2002	L-031602-NO3	0.081	QC 10107041B
105SCOTCA	04/10/2002	L-042402-NO3	0.065	QC 10107041B
105SCOTCA	05/13/2002	L-052002a-NO3	0.102	QC 10107041B
105SCOTCA	06/17/2002	L-062502-NO3	0.106	QC 10107041B
105SCOTCA	11/06/2002	110802-NO3	0.0403	QC 10107041B
105SCOTCA	02/10/2003	021203-NO3	0.0717	QC 10107041B
105SCOTCA	04/10/2003	041603-NO3-1	0.085	QC 10107041B
105SCOTCA	06/17/2003	062303-NO3	0.046	QC 10107041B
105SCOTFJ	04/10/2002	L-042402-NO3	0.096	QC 10107041B
105SCOTJB	10/09/2002	101102-NO3	0.0421	QC 10107041B
105SCOTSH	04/10/2002	L-042402-NO3	0.124	QC 10107041B

Table A.11 (cont'd). Samples with low level (0.36 ± 0.27 mg l^{-1}) Nitrate-N contamination.

Site	Sample Date	Batch ID	Nitrate-N	Method Name
105SCOTSH	10/08/2002	101002-NO3	0.0489	QC 10107041B
105SHA263	06/18/2003	062303-NO3-1	0.0968	QC 10107041B
105SHAEDG	02/10/2003	021203-NO3	0.0918	QC 10107041B
105SHAEDG	06/19/2003	062303-NO3-1	0.0709	QC 10107041B
105SHAMON	10/07/2002	100902-NO3	0.138	QC 10107041B
105SHAMON	06/19/2003	062303-NO3-1	0.0508	QC 10107041B
106TRHTCH	03/27/2002	L-040502-NO3	0.105	QC 10107041B
106TRHTCH	04/09/2002	L-041502-NO3	0.092	QC 10107041B
106TRHTCH	05/14/2002	L-052002b-NO3	0.122	QC 10107041B
106TRHTCH	06/18/2002	L-070102-NO3	0.104	QC 10107041B
106TRHTCH	10/06/2002	100802-NO3	0.0727	QC 10107041B
106TRHTCH	10/06/2002	100802-NO3	0.0663	QC 10107041B
106TRHTCH	11/04/2002	110702-NO3	0.0642	QC 10107041B
106TRHTCH	02/10/2003	021203-NO3	0.0836	QC 10107041B
106TRHTCH	04/17/2003	042103-NO3	0.0598	QC 10107041B
106TRHTCH	06/16/2003	061803-NO3	0.0588	QC 10107041B
106TRINDC	02/26/2002	L-030802a-NO3	0.084	QC 10107041B
106TRINDC	03/26/2002	L-040502-NO3	0.095	QC 10107041B
106TRINDC	04/09/2002	L-041502-NO3	0.099	QC 10107041B
106TRINDC	05/14/2002	L-052002b-NO3	0.096	QC 10107041B
106TRINDC	06/18/2002	L-070102-NO3	0.125	QC 10107041B
106TRINDC	10/06/2002	100802-NO3	0.0612	QC 10107041B
106TRINDC	11/13/2002	111502-NO3	0.058	QC 10107041B
106TRINDC	11/13/2002	111502-NO3	0.0481	QC 10107041B
106TRINDC	02/09/2003	021203-NO3	0.0576	QC 10107041B
106TRINDC	04/17/2003	042103-NO3	0.0477	QC 10107041B
106TRINDC	06/16/2003	061803-NO3	0.0365	QC 10107041B
106TRINFH	02/26/2002	L-030802a-NO3	0.076	QC 10107041B
106TRINFH	03/26/2002	L-040502-NO3	0.084	QC 10107041B
106TRINFH	04/08/2002	L-041502-NO3	0.074	QC 10107041B
106TRINFH	05/14/2002	L-052002b-NO3	0.101	QC 10107041B
106TRINFH	06/18/2002	L-070102-NO3	0.114	QC 10107041B
106TRINFH	10/16/2002	101802-NO3	0.0399	QC 10107041B
106TRINFH	11/13/2002	111502-NO3	0.11	QC 10107041B
106TRINFH	02/09/2003	021203-NO3	0.0332	QC 10107041B
106TRINFH	04/17/2003	042103-NO3	0.037	QC 10107041B
106TRINFH	06/16/2003	061803-NO3	0.0472	QC 10107041B
106TRINHP	03/25/2002	L-040902a-NO3	0.11	QC 10107041B
106TRINHP	04/08/2002	L-041502-NO3	0.043	QC 10107041B
106TRINHP	05/15/2002	L-052002c-NO3	0.113	QC 10107041B
106TRINHP	05/15/2002	L-052002c-NO3	0.103	QC 10107041B
106TRINHP	06/18/2002	L-070102-NO3	0.099	QC 10107041B
106TRINHP	10/16/2002	101802-NO3	0.0453	QC 10107041B

Table A.11 (cont'd). Samples with low level (0.36 ± 0.27 mg l^{-1}) Nitrate-N contamination.

Site	Sample Date	Batch ID	Nitrate-N	Method Name
106TRINHP	11/13/2002	111502-NO3	0.0661	QC 10107041B
106TRINHP	04/16/2003	042103-NO3	0.0731	QC 10107041B
106TRINHP	06/11/2003	061303-NO3	0.0441	QC 10107041B
106TRINPB	02/26/2002	L-030802a-NO3	0.078	QC 10107041B
106TRINPB	03/27/2002	L-040502-NO3	0.081	QC 10107041B
106TRINPB	04/09/2002	L-041502-NO3	0.089	QC 10107041B
106TRINPB	05/14/2002	L-052002b-NO3	0.117	QC 10107041B
106TRINPB	06/18/2002	L-070102-NO3	0.1	QC 10107041B
106TRINPB	10/06/2002	100802-NO3	0.0813	QC 10107041B
106TRINPB	11/04/2002	110702-NO3	0.0637	QC 10107041B
106TRINPB	02/09/2003	021203-NO3	0.0724	QC 10107041B
106TRINPB	04/17/2003	042103-NO3	0.0472	QC 10107041B
106TRINPB	06/16/2003	061803-NO3	0.0416	QC 10107041B
106TRINSF	02/26/2002	L-030802a-NO3	0.061	QC 10107041B
106TRINSF	03/26/2002	L-040502-NO3	0.091	QC 10107041B
106TRINSF	04/08/2002	L-041502-NO3	0.087	QC 10107041B
106TRINSF	05/14/2002	L-052002b-NO3	0.097	QC 10107041B
106TRINSF	06/18/2002	L-070102-NO3	0.133	QC 10107041B
106TRINSF	10/16/2002	101802-NO3	0.0324	QC 10107041B
106TRINSF	11/12/2002	111402-NO3	0.0526	QC 10107041B
106TRINSF	04/16/2003	042103-NO3	0.0409	QC 10107041B
106TRINSF	06/10/2003	061203-NO3	0.0403	QC 10107041B
106TRINSL	02/26/2002	L-030802a-NO3	0.08	QC 10107041B
106TRINSL	03/26/2002	L-040502-NO3	0.031	QC 10107041B
106TRINSL	04/08/2002	L-041502-NO3	0.133	QC 10107041B
106TRINSL	05/14/2002	L-052002b-NO3	0.103	QC 10107041B
106TRINSL	06/18/2002	L-070102-NO3	0.111	QC 10107041B
106TRINSL	10/16/2002	101802-NO3	0.0348	QC 10107041B
106TRINSL	11/12/2002	111402-NO3	0.0712	QC 10107041B
106TRINSL	04/16/2003	042103-NO3	0.0533	QC 10107041B
106TRINSL	06/10/2003	061203-NO3	0.036	QC 10107041B
106TRINWP	03/25/2002	L-040902a-NO3	0.11	QC 10107041B
106TRINWP	05/15/2002	L-052002c-NO3	0.116	QC 10107041B
106TRINWP	06/18/2002	L-070102-NO3	0.107	QC 10107041B
106TRINWP	10/16/2002	101802-NO3	0.0317	QC 10107041B
106TRINWP	11/13/2002	111502-NO3	0.121	QC 10107041B
106TRINWP	04/16/2003	042103-NO3	0.0644	QC 10107041B
106TRINWP	06/11/2003	061303-NO3	0.0682	QC 10107041B
107RDWDOR	06/19/2002	L-070302-NO3	0.138	QC 10107041B
107RDWDOR	10/15/2002	101702-NO3	0.132	QC 10107041B
107RDWDOR	11/12/2002	111402-NO3	0.125	QC 10107041B
107RDWDOR	06/10/2003	061203-NO3	0.0593	QC 10107041B
108LITCRN	06/12/2002	L-061802-NO3	0.138	QC 10107041B

Table A.11 (cont'd). Samples with low level (0.36 ± 0.27 mg l^{-1}) Nitrate-N contamination.

Site	Sample Date	Batch ID	Nitrate-N	Method Name
109MADBLU	03/18/2002	L-032802-NO3	0.145	QC 10107041B
109MADBLU	04/22/2002	L-050302-NO3	0.132	QC 10107041B
109MADBLU	05/20/2002	L-053002-NO3	0.102	QC 10107041B
109MADBLU	06/10/2002	L-061402-NO3	0.074	QC 10107041B
109MADBLU	10/15/2002	101702-NO3	0.0786	QC 10107041B
109MADBLU	11/12/2002	111402-NO3	0.119	QC 10107041B
109MADBLU	04/15/2003	042103-NO3	0.0624	QC 10107041B
109MADBLU	06/10/2003	061203-NO3	0.0522	QC 10107041B
109MADBUT	02/25/2002	L-030702-NO3	0.071	QC 10107041B
109MADBUT	03/19/2002	L-032802a-NO3	0.098	QC 10107041B
109MADBUT	04/22/2002	L-050302-NO3	0.102	QC 10107041B
109MADBUT	04/22/2002	L-050302-NO3	0.106	QC 10107041B
109MADBUT	05/20/2002	L-053002-NO3	0.082	QC 10107041B
109MADBUT	06/10/2002	L-061402-NO3	0.056	QC 10107041B
109MADRUT	02/26/2002	L-030802a-NO3	0.062	QC 10107041B
109MADRUT	03/20/2002	L-040802-NO3	0.11	QC 10107041B
109MADRUT	04/24/2002	L-051502a-NO3	0.106	QC 10107041B
109MADRUT	06/11/2002	L-061402a-NO3	0.053	QC 10107041B
110ELKNFK	04/22/2002	L-051302-NO3	0.102	QC 10107041B
110ELKNFK	05/22/2002	L-053002a-NO3	0.077	QC 10107041B
110ELKNFK	06/12/2002	L-061802-NO3	0.079	QC 10107041B
110ELKRIV	04/23/2002	L-051302-NO3	0.131	QC 10107041B
110ELKRIV	05/22/2002	L-053002a-NO3	0.084	QC 10107041B
110ELKRIV	06/12/2002	L-061802-NO3	0.099	QC 10107041B
110ELKSFK	04/22/2002	L-051302-NO3	0.134	QC 10107041B
110ELKSFK	05/22/2002	L-053002a-NO3	0.077	QC 10107041B
110ELKSFK	06/12/2002	L-061802-NO3	0.086	QC 10107041B
110FRESHW	06/12/2002	L-061802-NO3	0.064	QC 10107041B
110FRESUP	03/18/2002	L-032802-NO3	0.119	QC 10107041B
110FRESUP	04/23/2002	L-051302-NO3	0.103	QC 10107041B
110FRESUP	06/10/2002	L-061402-NO3	0.049	QC 10107041B
110FRESUP	06/10/2002	L-061402-NO3	0.049	QC 10107041B
110JACBAY	06/10/2002	L-061402-NO3	0.084	QC 10107041B
110SALHY1	06/12/2002	L-061802-NO3	0.145	QC 10107041B
111EELALD	03/17/2002	L-032802-NO3	0.037	QC 10107041B
111EELALD	05/19/2002	L-053002-NO3	0.114	QC 10107041B
111EELALD	06/09/2002	L-061402-NO3	0.045	QC 10107041B
111EELBEN	02/24/2002	L-030702-NO3	0.092	QC 10107041B
111EELBEN	03/17/2002	L-032802-NO3	0.037	QC 10107041B
111EELBEN	04/21/2002	L-050302-NO3	0.086	QC 10107041B
111EELBEN	05/19/2002	L-053002-NO3	0.107	QC 10107041B
111EELBEN	06/09/2002	L-061402-NO3	0.062	QC 10107041B
111EELBRN	03/12/2002	L-032502-NO3	0.04	QC 10107041B

Table A.11 (cont'd). Samples with low level (0.36 ± 0.27 mg l^{-1}) Nitrate-N contamination.

Site	Sample Date	Batch ID	Nitrate-N	Method Name
111EELBRN	04/16/2002	L-050202-NO3	0.089	QC 10107041B
111EELBRN	05/07/2002	L-051002-NO3	0.09	QC 10107041B
111EELBRN	05/07/2002	L-051002-NO3	0.094	QC 10107041B
111EELBRN	06/25/2002	L-070302a-NO3	0.092	QC 10107041B
111EELBRN	10/23/2002	102502-NO3	0.0436	QC 10107041B
111EELBRN	02/19/2003	022403-NO3	0.0714	QC 10107041B
111EELBRN	04/23/2003	042503-NO3-2	0.0402	QC 10107041B
111EELBRN	06/17/2003	062303-NO3	0.0407	QC 10107041B
111EELHOL	02/28/2002	L-031602-NO3	0.084	QC 10107041B
111EELHOL	03/17/2002	L-032802-NO3	0.035	QC 10107041B
111EELHOL	04/21/2002	L-050302-NO3	0.087	QC 10107041B
111EELHOL	05/19/2002	L-053002-NO3	0.094	QC 10107041B
111EELHOL	06/09/2002	L-061402-NO3	0.043	QC 10107041B
111EELHOL	10/21/2002	102302-NO3	0.0488	QC 10107041B
111EELHOL	11/18/2002	112002-NO3	0.107	QC 10107041B
111EELHOL	02/18/2003	021903-NO3	0.0694	QC 10107041B
111EELHOL	04/22/2003	042503-NO3	0.112	QC 10107041B
111EELHOL	06/17/2003	061803-NO3	0.0519	QC 10107041B
111EELHST	03/11/2002	L-032502-NO3	0.086	QC 10107041B
111EELHST	04/15/2002	L-050202-NO3	0.058	QC 10107041B
111EELHST	05/06/2002	L-051002-NO3	0.088	QC 10107041B
111EELHST	06/24/2002	L-070302a-NO3	0.085	QC 10107041B
111EELHST	06/24/2002	L-070302a-NO3	0.073	QC 10107041B
111EELMAN	03/11/2002	L-032502-NO3	0.042	QC 10107041B
111EELMAN	04/15/2002	L-050202-NO3	0.06	QC 10107041B
111EELMAN	05/06/2002	L-051002-NO3	0.084	QC 10107041B
111EELMAN	06/24/2002	L-070302a-NO3	0.089	QC 10107041B
111EELMAN	10/22/2002	102302-NO3	0.0427	QC 10107041B
111EELMAN	11/19/2002	112002-NO3	0.116	QC 10107041B
111EELMAN	02/17/2003	021903-NO3	0.0688	QC 10107041B
111EELMAN	04/21/2003	042503-NO3	0.0498	QC 10107041B
111EELMAN	06/18/2003	062303-NO3	0.0526	QC 10107041B
111EELMDV	02/28/2002	L-031602-NO3	0.085	QC 10107041B
111EELMDV	03/21/2002	L-040802-NO3	0.142	QC 10107041B
111EELMDV	05/23/2002	L-053002a-NO3	0.082	QC 10107041B
111EELMDV	06/13/2002	L-061802-NO3	0.086	QC 10107041B
111EELMDV	10/21/2002	102302-NO3	0.0393	QC 10107041B
111EELMDV	02/18/2003	021903-NO3	0.0604	QC 10107041B
111EELMDV	04/22/2003	042503-NO3	0.0658	QC 10107041B
111EELMDV	06/17/2003	061803-NO3	0.0544	QC 10107041B
111EELSFK	02/24/2002	L-030702-NO3	0.075	QC 10107041B
111EELSFK	03/21/2002	L-040802-NO3	0.13	QC 10107041B
111EELSFK	04/25/2002	L-051502a-NO3	0.103	QC 10107041B

Table A.11 (cont'd). Samples with low level (0.36 ± 0.27 mg l^{-1}) Nitrate-N contamination.

Site	Sample Date	Batch ID	Nitrate-N	Method Name
111EELSFK	05/23/2002	L-053002a-NO3	0.084	QC 10107041B
111EELSFK	06/13/2002	L-061802-NO3	0.079	QC 10107041B
111EELSFK	10/21/2002	102302-NO3	0.0462	QC 10107041B
111EELSFK	02/18/2003	021903-NO3	0.0602	QC 10107041B
111EELSFK	04/22/2003	042503-NO3	0.0589	QC 10107041B
111EELSFK	06/17/2003	061803-NO3	0.0521	QC 10107041B
111EELVAN	03/13/2002	L-032602-NO3	0.075	QC 10107041B
111EELVAN	04/16/2002	L-050202-NO3	0.083	QC 10107041B
111EELVAN	05/07/2002	L-051002-NO3	0.104	QC 10107041B
111EELVAN	06/25/2002	L-070302a-NO3	0.083	QC 10107041B
111EELVAN	10/21/2002	102302-NO3	0.037	QC 10107041B
111EELVAN	02/17/2003	021903-NO3	0.048	QC 10107041B
111EELVAN	04/21/2003	042503-NO3	0.0464	QC 10107041B
111EELVAN	06/16/2003	061803-NO3	0.0856	QC 10107041B
111ELDRCR	03/12/2002	L-032502-NO3	0.034	QC 10107041B
111ELDRCR	03/12/2002	L-032502-NO3	0.031	QC 10107041B
111ELDRCR	04/16/2002	L-050202-NO3	0.077	QC 10107041B
111ELDRCR	04/16/2002	L-050202-NO3	0.078	QC 10107041B
111ELDRCR	05/07/2002	L-051002-NO3	0.093	QC 10107041B
111ELDRCR	06/25/2002	L-070302a-NO3	0.098	QC 10107041B
111ELDRCR	10/23/2002	102502-NO3	0.0541	QC 10107041B
111ELDRCR	11/20/2002	112502-NO3	0.0414	QC 10107041B
111ELDRCR	02/19/2003	022403-NO3	0.0325	QC 10107041B
111ELDRCR	04/23/2003	042503-NO3-2	0.0392	QC 10107041B
111ELDRCR	04/23/2003	042503-NO3-2	0.0427	QC 10107041B
111ELDRCR	06/17/2003	062303-NO3	0.111	QC 10107041B
111MFKEEL	03/11/2002	L-032502-NO3	0.04	QC 10107041B
111MFKEEL	04/15/2002	L-050202-NO3	0.08	QC 10107041B
111MFKEEL	05/06/2002	L-051002-NO3	0.094	QC 10107041B
111MFKEEL	06/24/2002	L-070302a-NO3	0.077	QC 10107041B
111MFKEEL	10/22/2002	102302-NO3	0.0506	QC 10107041B
111MFKEEL	11/19/2002	112002-NO3	0.128	QC 10107041B
111MFKEEL	04/21/2003	042503-NO3	0.0432	QC 10107041B
111MFKEEL	06/18/2003	062303-NO3	0.037	QC 10107041B
111NFELMI	03/11/2002	L-032502-NO3	0.032	QC 10107041B
111NFELMI	04/15/2002	L-050202-NO3	0.018	QC 10107041B
111NFELMI	05/06/2002	L-051002-NO3	0.08	QC 10107041B
111NFELMI	06/24/2002	L-070302a-NO3	0.106	QC 10107041B
111NFELMI	10/22/2002	102302-NO3	0.048	QC 10107041B
111NFELMI	11/19/2002	112002-NO3	0.116	QC 10107041B
111NFELMI	02/17/2003	021903-NO3	0.0469	QC 10107041B
111NFELMI	04/21/2003	042503-NO3	0.0477	QC 10107041B
111NFELMI	06/18/2003	062303-NO3	0.0468	QC 10107041B

Table A.11 (cont'd). Samples with low level (0.36 ± 0.27 mg l^{-1}) Nitrate-N contamination.

Site	Sample Date	Batch ID	Nitrate-N	Method Name
111VAN101	05/23/2002	L-053002a-NO3	0.088	QC 10107041B
111VAN101	06/13/2002	L-061802-NO3	0.134	QC 10107041B
111VANBRG	02/26/2002	L-030802a-NO3	0.073	QC 10107041B
111VANBRG	02/26/2002	L-030802a-NO3	0.061	QC 10107041B
111VANBRG	03/20/2002	L-040802-NO3	0.101	QC 10107041B
111VANBRG	04/24/2002	L-051502a-NO3	0.105	QC 10107041B
111VANBRG	05/22/2002	L-053002a-NO3	0.071	QC 10107041B
111VANBRG	06/11/2002	L-061402a-NO3	0.044	QC 10107041B
111VANDIN	02/26/2002	L-030802a-NO3	0.054	QC 10107041B
111VANDIN	03/20/2002	L-040802-NO3	0.081	QC 10107041B
111VANDIN	04/24/2002	L-051502a-NO3	0.103	QC 10107041B
111VANDIN	05/22/2002	L-053002a-NO3	0.125	QC 10107041B
111VANDIN	06/11/2002	L-061402a-NO3	0.106	QC 10107041B
111YAGCAR	02/26/2002	L-030802a-NO3	0.098	QC 10107041B
111YAGCAR	03/18/2002	L-032802a-NO3	0.046	QC 10107041B
111YAGCAR	04/24/2002	L-051502a-NO3	0.1	QC 10107041B
111YAGCAR	05/19/2002	L-053002-NO3	0.102	QC 10107041B
111YAGCAR	06/11/2002	L-061402a-NO3	0.046	QC 10107041B
113GUAGRP	03/14/2002	L-032602-NO3	0.081	QC 10107041B
113GUAGRP	04/25/2002	L-051502-NO3	0.105	QC 10107041B
113GUAGRP	05/09/2002	L-052002-NO3	0.106	QC 10107041B
113GUAGRP	06/27/2002	L-070502-NO3	0.082	QC 10107041B
113GUAGRP	10/24/2002	102502-NO3	0.049	QC 10107041B
113GUAGRP	11/25/2002	112602-NO3	0.0433	QC 10107041B
113GUAGRP	02/20/2003	022403-NO3	0.0404	QC 10107041B
113GUAGRP	02/20/2003	022403-NO3	0.0395	QC 10107041B
113GUAGRP	04/24/2003	042503-NO3-2	0.109	QC 10107041B
113GUAGRP	06/25/2003	062603-NO3	0.0383	QC 10107041B
114RRCLO1	10/23/2002	102502-NO3	0.0814	QC 10107041B
114RRHMB1	06/26/2002	L-070502-NO3	0.089	QC 10107041B
114RRHMB1	10/23/2002	102502-NO3	0.0357	QC 10107041B
114RRHMB1	11/21/2002	112502-NO3	0.0495	QC 10107041B
114RRJB01	06/26/2002	L-070502-NO3	0.084	QC 10107041B
114RRJB01	10/24/2002	102502-NO3	0.0383	QC 10107041B
114RRJB01	10/24/2002	102502-NO3	0.0429	QC 10107041B
114RRJB01	11/21/2002	112502-NO3	0.0436	QC 10107041B
114RRTAL1	05/07/2002	L-051002-NO3	0.142	QC 10107041B
114RRTAL1	06/26/2002	L-070502-NO3	0.142	QC 10107041B
114RRTAL1	10/23/2002	102502-NO3	0.0653	QC 10107041B
114RRTAL1	11/21/2002	112502-NO3	0.1	QC 10107041B
114RRTAL1	11/21/2002	112502-NO3	0.0975	QC 10107041B
114RRTAL1	06/19/2003	062303-NO3-1	0.122	QC 10107041B

APPENDIX B.

Analytical Information

Table B.1. Conventional Water Quality Parameters. Various methods, detection limits, reporting limits and number of samples in each detection category.

	Sampling Period	Method Name	MDL	RL	ND	DNQ	QV
Ammonia as N (mg/L)	03/2001 - 06/2001	EPA 350.3	0.05	0.05	60		8
	03/2001 - 06/2001	EPA 350.3	0.2	0.2	80		
	02/2002 - 06/2003	EPA 350.3	0.05	0.1	166	240	48
	10/2004 - 06/2006	EPA 350.3	0.04	0.1	229	52	2
Chloride (mg/L)	03/2001 - 06/2001	EPA 300.0	1	1	1		58
	03/2001 - 06/2001	EPA 300.0	0.1	0.1			81
	05/2001	EPA 300.0	2	2			9
	02/2002 - 10/2002	EPA 300.0	0.15	0.25		2	247
	10/2002 - 04/2003	EPA 300.0	0.2	0.25			163
	02/2006	EPA 300.0	0.8	1.4			1
	06/2003 - 06/2006	EPA 300.0	0.2	0.35		1	297
	02/2006 - 04/2006	EPA 300.0	2	3.5			3
	02/2006 - 06/2006	EPA 300.0	0.4	0.7			22
	06/2006	EPA 300.0	1	1.75			1
	06/2006	EPA 300.0	4	7			1
Nitrate + Nitrite as N (mg/L)	03/2001 - 06/2001	EPA 353.2	0.05	0.05	63		5
Nitrate as N (mg/L)	03/2001 - 05/2001	EPA 353.2	0.1	0.1	25		17
	06/2001	EPA 300.0	0.1	0.1	24		14
	02/2002	EPA 353.3	0.05	0.05		7	
	02/2002	EPA 300.0	0.09	0.23			12
	02/2002 - 11/2005	QC 10107041B	0.005	0.01	16	15	524
	02/2005 - 06/2006	QC 10107041B	0.01	0.02	43	27	90
	02/2006	QC 10107041B	0.02	0.04			3
Nitrite as N (mg/L)	03/2001 - 05/2001	EPA 300.0	0.1	0.1	42		
	06/2001	EPA 300.0	0.1	0.1	38		
	02/2002	FR 8507	0.01	0.03		11	
	02/2002 - 09/2005	QC 10107041B	0.005	0.01	363	277	14
	11/2005 - 06/2006	QC 10107041B	0.002	0.005	58	11	3
Nitrogen, Total Kjeldahl (mg/L)	03/2001 - 06/2001	EPA 351.4	1	1	80		
	03/2001 - 06/2001	EPA 351.2	0.5	0.5	68		
	02/2002 - 06/2002	EPA 351.3	0.25	0.5		239	7
	10/2002 - 11/2002	EPA 351.3	0.3	0.5	63	9	11
	10/2004 - 04/2006	QC 10107062E	0.12	0.25	42	105	90
	02/2003 - 06/2003	QC 10107062E	0.12	0.5	46	59	20
	02/2006	QC 10107062E	0.25	0.25	11		7
	04/2006	QC 10107062E	0.25	0.5	4	3	3
	06/2006	QC 10107062E	0.5	0.5	13	1	4

Table B.1 (cont'd). Conventional Water Quality Parameters. Various methods, detection limits, reporting limits and number of samples in each detection category.

	Sampling Period	Method Name	MDL	RL	ND	DNQ	QV
OrthoPhosphate as P, Dissolved (mg/L)	02/2002	EPA 365.3	0.05	0.05		11	
	02/2002	EPA 365.3	0.03	0.05		29	6
	03/2002 - 06/2006	QC 10115011M	0.005	0.01	11	90	590
OrthoPhosphate as P, Total (mg/L)	03/2001 - 06/2001	EPA 365.2	0.05	0.05	65		3
	03/2001 - 06/2001	EPA 365.2	0.01	0.01	33		36
Phosphorus as P, Total (mg/L)	03/2001 - 06/2001	EPA 365.2	0.05	0.05	64		4
	03/2001 - 06/2001	EPA 365.2	0.02	0.02	11		69
	10/2002 - 02/2003	EPA 365.3	0.03	0.05	47	21	56
	04/2003 - 06/2006	QC 10115011D	0.03	0.05	164	100	103
Sulfate (mg/L)	03/2001 - 06/2001	EPA 300.0	1	1		1	59
	03/2001 - 06/2001	EPA 300.0	0.5	0.5			81
	05/2001	EPA 300.0	2	2			9
	02/2002 - 10/2002	EPA 300.0	0.37	1		1	248
	10/2002 - 04/2003	EPA 300.0	0.4	1			163
	06/2003	EPA 300.0	0.5	0.75			42
	10/2004 - 06/2006	EPA 300.0	0.5	0.7			252
	02/2006	EPA 300.0	2	2.8			1
	02/2006 - 06/2006	EPA 300.0	5	7			4
	02/2006 - 06/2006	EPA 300.0	1	1.4			25
	06/2006	EPA 300.0	2.5	3.5			1

Table B.2. Trace Metals. Various methods, detection limits, reporting limits and number of samples in each detection category.

Analyte	Sampling Period	Method Name	MDL	RL	ND	DNQ	QV
Aluminum (Total) (ug/L)	06/2001	EPA 6010B	100	100	18		20
	02/2002 - 05/2002	EPA 1638M	0.05	0.1			193
	06/2002 - 06/2003	EPA 1638M	0.1	0.3			252
	10/2004 - 06/2006	EPA 1638M	0.1	0.5	2		273
Arsenic (Total) (ug/L)	06/2001	EPA 6010B	100	100	37	1	
	02/2002 - 05/2002	EPA 1638M	0.05	0.1	1	1	191
	06/2002 - 06/2003	EPA 1638M	0.1	0.3	19	42	191
	10/2004 - 06/2006	EPA 1638M	0.1	0.5	9	98	168
Cadmium (Total) (ug/L)	03/2001 - 06/2001	EPA 200.7	10	10	147		1
	02/2002 - 05/2002	EPA 1638M	0.002	0.01	165	22	6
	06/2002	EPA 1638M	0.002	0.006	44	7	2
	10/2002 - 06/2003	EPA 1638M	0.002	0.05	52	147	
	10/2004 - 06/2006	EPA 1638M	0.01	0.03	236	32	7
Chromium (Total) (ug/L)	03/2001 - 06/2001	EPA 200.7	10	10	148		1
	02/2002 - 05/2002	EPA 1638M	0.03	0.05	2	3	188
	06/2002 - 06/2003	EPA 1638M	0.03	0.09	3	5	244
	10/2004 - 06/2006	EPA 1638M	0.03	0.1	2	1	272

Table B.2 (cont'd). Trace Metals. Various methods, detection limits, reporting limits and number of samples in each detection category.

Copper (Total) (ug/L)	03/2001 - 06/2001	EPA 200.7	10	10	148		3
	02/2002 - 06/2003	EPA 1638M	0.003	0.01	1		413
	06/2002	EPA 1638M	0.003	0.03			31
	10/2004 - 06/2006	EPA 1638M	0.01	0.03			275
Lead (Total) (ug/L)	03/2001 - 06/2001	EPA 6010B	75	75	68		
	03/2001 - 05/2001	EPA 200.9	20	20	42		1
	06/2001	EPA 6010B	100	100	38		
	02/2002 - 05/2002	EPA 1638M	0.006	0.01	55	4	134
	06/2002	EPA 1638M	0.002	0.006	25	3	25
	10/2002 - 06/2003	EPA 1638M	0.002	0.05	36	90	73
	10/2004 - 06/2006	EPA 1638M	0.01	0.03	49	42	184
Nickel (Total) (ug/L)	02/2002 - 05/2002	EPA 1638M	0.006	0.01	3	1	189
	06/2002 - 10/2002	EPA 1638M	0.006	0.018	3		196
	06/2002	EPA 1638M	0.006	0.02	1		52
	06/2004 - 10/2004	EPA 1638M	0.01	0.05	5	3	267
	03/2002 - 05/2002	EPA 200.7	10	10	42		
	06/2001	EPA 6010B	20	20	19		
	03/2001 - 06/2001	EPA 6010B	30	30	68		
Mercury (Total) (ng/L)	03/2001 - 06/2001	EPA 245.1	1000	1000	81		
	03/2001 - 06/2001	EPA 7470AB	200	200	68		
	02/2002 - 11/2002	EPA 1631B	0.09	0.2	6		318
	04/2003	EPA 1631EM	0.16	0.48			32
	06/2003	EPA 1631EM	0.144	0.432		1	41
	10/2004 - 04/2005	EPA 1631EM	0.16	0.16			148
	02/2003 - 06/2006	EPA 1631EM	0.2	0.2	4		161
Selenium (Total) (ug/L)	06/2001	EPA 6010B	100	100	38		
	02/2002 - 05/2002	EPA 1638M	0.05	0.1	59	2	132
	06/2002 - 06/2003	EPA 1638M	0.1	0.3	102	101	49
	10/2004 - 06/2006	EPA 1638M	0.1	0.5	67	172	36
Silver (Total) (ug/L)	06/2001	EPA 6010B	10	10	38		
	02/2002 - 05/2002	EPA 1638M	0.008	0.01	172	5	16
	06/2002	EPA 1638M	0.008	0.02	39	8	6
	10/2002 - 06/2003	EPA 1638M	0.008	0.1	171	28	
	10/2004 - 06/2006	EPA 1638M	0.01	0.05	251	24	
Zinc (Total) (ug/L)	03/2001 - 06/2001	EPA 200.7	20	20	141		8
	02/2002 - 05/2002	EPA 1638M	0.02	0.05	32	3	158
	06/2002 - 06/2003	EPA 1638M	0.02	0.06	24	1	227
	10/2004 - 06/2006	EPA 1638M	0.1	0.3	28	47	200

Table B.3. Pesticides. Various methods, detection limits, reporting limits and number of samples in each detection category.

Analyte	Sampling Period	Method Name	MDL	RL	ND	DNQ	QV
Other Herbicides							
AMPA (mg/L)	10/2002 - 06/2006	EPA 547M	5	10	149		
Glyphosate (mg/L)	06/2001	EPA 547	5	5	4		
	10/2002 - 06/2005	EPA 547M	2	5	121		
	04/2006 - 06/2006	EPA 547M	3	5	28		
Triazine Pesticides							
Ametryn (mg/L)	03/2001 - 05/2001	EPA 619	0.5	0.5	10		
	06/2002 - 06/2006	EPA 619M	0.02	0.05	273		
Atraton (mg/L)	03/2001 - 05/2001	EPA 619	0.5	0.5	10		
	06/2002 - 06/2006	EPA 619M	0.02	0.05	273		
Atrazine (mg/L)	03/2001 - 05/2001	EPA 619	0.5	0.5	10		
	06/2002 - 06/2006	EPA 619M	0.02	0.05	273		
Prometon (mg/L)	03/2001 - 05/2001	EPA 619	0.5	0.5	10		
	06/2002 - 06/2006	EPA 619M	0.02	0.05	273		
Prometryn (mg/L)	03/2001 - 05/2001	EPA 619	0.5	0.5	10		
	06/2002 - 06/2006	EPA 619M	0.02	0.05	273		
Propazine (mg/L)	03/2001 - 05/2001	EPA 619	0.5	0.5	10		
	06/2002 - 06/2006	EPA 619M	0.02	0.05	273		
Secbumeton (mg/L)	06/2002 - 06/2006	EPA 619M	0.02	0.05	273		
Simazine (mg/L)	03/2001 - 06/2001	EPA 619	0.5	0.5	14		
	06/2002 - 06/2006	EPA 619M	0.02	0.05	269	2	2
Simetryn (mg/L)	03/2001 - 05/2001	EPA 619	0.5	0.5	10		
	06/2002 - 06/2006	EPA 619M	0.02	0.05	273		
Terbuthylazine (mg/L)	06/2002 - 06/2006	EPA 619M	0.02	0.05	273		
Terbutryn (mg/L)	03/2001 - 05/2001	EPA 619	0.5	0.5	10		
	06/2002 - 06/2006	EPA 619M	0.02	0.05	273		
Organochlorine Pesticides							
Aldrin (mg/L)	03/2001 - 05/2001	EPA 8081A	0.1	0.1	10		
	02/2002 - 04/2005	EPA 8081AM	0.001	0.002	247	1	
	06/2005 - 06/2006	EPA 8081BM	0.001	0.002	81		
Chlordane, cis- (mg/L)	02/2002 - 04/2005	EPA 8081AM	0.001	0.002	248		
	06/2005 - 06/2006	EPA 8081BM	0.001	0.002	81		
Chlordane, trans- (mg/L)	02/2002 - 04/2005	EPA 8081AM	0.001	0.002	248		
	06/2005 - 06/2006	EPA 8081BM	0.001	0.002	80		1
Chlordene, alpha- (mg/L)	02/2002 - 04/2005	EPA 8081AM	0.001	0.002	248		
	06/2005 - 06/2006	EPA 8081BM	0.001	0.002	81		
Chlordene, gamma- (mg/L)	02/2002 - 04/2005	EPA 8081AM	0.001	0.002	245		3
	06/2005 - 06/2006	EPA 8081BM	0.001	0.002	81		
Dacthal (mg/L)	02/2002 - 04/2005	EPA 8081AM	0.001	0.002	248		
	06/2005 - 06/2006	EPA 8081BM	0.001	0.002	81		

Table B.3 (cont'd). Pesticides. Various methods, detection limits, reporting limits and number of samples in each detection category.

Analyte	Sampling Period			Method Name	MDL	RL	ND	DNQ	QV
DDD(o,p') (mg/L)	02/2002	-	04/2005	EPA 8081AM	0.001	0.002	248		
	06/2005	-	06/2006	EPA 8081BM	0.001	0.002	81		
DDD(p,p') (mg/L)	03/2001	-	05/2001	EPA 8081A	0.1	0.1	10		
	02/2002	-	04/2005	EPA 8081AM	0.001	0.002	247	1	
	06/2005	-	06/2006	EPA 8081BM	0.001	0.002	81		
DDE(o,p') (mg/L)	02/2002	-	04/2005	EPA 8081AM	0.001	0.002	247	1	
	06/2005	-	06/2006	EPA 8081BM	0.001	0.002	81		
DDE(p,p') (mg/L)	03/2001	-	05/2001	EPA 8081A	0.1	0.1	10		
	02/2002	-	04/2005	EPA 8081AM	0.001	0.002	241	5	2
	06/2005	-	06/2006	EPA 8081BM	0.001	0.002	81		
DDMU(p,p') (mg/L)	02/2002	-	04/2005	EPA 8081AM	0.001	0.002	246	2	
	06/2005	-	06/2006	EPA 8081BM	0.001	0.002	81		
DDT(o,p') (mg/L)	02/2002	-	04/2005	EPA 8081AM	0.001	0.002	247		1
	06/2005	-	06/2006	EPA 8081BM	0.001	0.002	81		
DDT(p,p') (mg/L)	03/2001	-	05/2001	EPA 8081A	0.1	0.1	10		
	02/2002	-	04/2005	EPA 8081AM	0.002	0.005	213	9	
	10/2002	-	11/2002	EPA 8081AM	0.003	0.005	24	2	1
	06/2005	-	06/2006	EPA 8081BM	0.002	0.005	81		
Dieldrin (mg/L)	03/2001	-	05/2001	EPA 8081A	0.1	0.1	10		
	02/2002	-	04/2005	EPA 8081AM	0.001	0.002	248		
	06/2005	-	06/2006	EPA 8081BM	0.001	0.002	81		
Endosulfan I (mg/L)	03/2001	-	05/2001	EPA 8081A	0.1	0.1	10		
	02/2002	-	04/2005	EPA 8081AM	0.001	0.002	247	1	
	06/2005	-	06/2006	EPA 8081BM	0.001	0.002	81		
Endosulfan II (mg/L)	03/2001	-	05/2001	EPA 8081A	0.1	0.1	10		
	02/2002	-	04/2005	EPA 8081AM	0.001	0.002	248		
	06/2005	-	06/2006	EPA 8081BM	0.001	0.002	81		
Endosulfan sulfate (mg/L)	03/2001	-	05/2001	EPA 8081A	0.1	0.1	10		
	02/2002	-	04/2005	EPA 8081AM	0.001	0.002	232	16	
	06/2005	-	06/2006	EPA 8081BM	0.001	0.002	81		
Endrin (mg/L)	03/2001	-	05/2001	EPA 8081A	0.1	0.1	10		
	02/2002	-	04/2005	EPA 8081AM	0.001	0.002	248		
	06/2005	-	06/2006	EPA 8081BM	0.001	0.002	81		
Endrin Aldehyde (mg/L)	03/2001	-	05/2001	EPA 8081A	0.1	0.1	10		
	02/2002	-	04/2005	EPA 8081AM	0.002	0.005	222		
	10/2002	-	11/2002	EPA 8081AM	0.003	0.005	26		
	06/2005	-	06/2006	EPA 8081BM	0.002	0.005	81		
Endrin Ketone (mg/L)	02/2002	-	04/2005	EPA 8081AM	0.002	0.005	222		
	10/2002	-	11/2002	EPA 8081AM	0.003	0.005	26		
	06/2005	-	06/2006	EPA 8081BM	0.002	0.005	81		

Table B.3 (cont'd). Pesticides. Various methods, detection limits, reporting limits and number of samples in each detection category.

Analyte	Sampling Period			Method Name	MDL	RL	ND	DNQ	QV
HCH, alpha (mg/L)	03/2001	-	05/2001	EPA 8081A	0.1	0.1	10		
	02/2002	-	04/2005	EPA 8081AM	0.001	0.002	241	7	
	06/2005	-	06/2006	EPA 8081BM	0.001	0.002	81		
HCH, beta (mg/L)	03/2001	-	05/2001	EPA 8081A	0.1	0.1	10		
	02/2002	-	04/2005	EPA 8081AM	0.001	0.002	247	1	
	06/2005	-	06/2006	EPA 8081BM	0.001	0.002	81		
HCH, delta (mg/L)	03/2001	-	05/2001	EPA 8081A	0.1	0.1	10		
	02/2002	-	04/2005	EPA 8081AM	0.001	0.002	244	4	
	06/2005	-	06/2006	EPA 8081BM	0.001	0.002	81		
HCH, gamma (mg/L)	03/2001	-	05/2001	EPA 8081A	0.1	0.1	10		
	02/2002	-	04/2005	EPA 8081AM	0.001	0.002	246	2	
	06/2005	-	06/2006	EPA 8081BM	0.001	0.002	81		
Heptachlor (mg/L)	03/2001	-	05/2001	EPA 8081A	0.1	0.1	10		
	02/2002	-	04/2005	EPA 8081AM	0.001	0.002	248		
	06/2005	-	06/2006	EPA 8081BM	0.001	0.002	81		
Heptachlor epoxide (mg/L)	03/2001	-	05/2001	EPA 8081A	0.1	0.1	10		
	02/2002	-	04/2005	EPA 8081AM	0.001	0.002	246	2	
	06/2005	-	06/2006	EPA 8081BM	0.001	0.002	81		
Hexachlorobenzene (mg/L)	02/2002	-	04/2005	EPA 8081AM	5E-04	0.001	233	14	1
	06/2005	-	06/2006	EPA 8081BM	5E-04	0.001	81		
Methoxychlor (mg/L)	03/2001	-	05/2001	EPA 8081A	0.1	0.1	10		
	02/2002	-	04/2005	EPA 8081AM	0.001	0.002	247	1	
	06/2005	-	06/2006	EPA 8081BM	0.001	0.002	81		
Mirex (mg/L)	02/2002	-	04/2005	EPA 8081AM	0.001	0.002	248		
	06/2005	-	06/2006	EPA 8081BM	0.001	0.002	81		
Nonachlor, cis- (mg/L)	02/2002	-	04/2005	EPA 8081AM	0.001	0.002	248		
	06/2005	-	06/2006	EPA 8081BM	0.001	0.002	81		
Nonachlor, trans- (mg/L)	02/2002	-	04/2005	EPA 8081AM	0.001	0.002	247	1	
	06/2005	-	06/2006	EPA 8081BM	0.001	0.002	81		
Oxadiazon (mg/L)	02/2002	-	04/2005	EPA 8081AM	0.001	0.002	242	1	5
	06/2005	-	06/2006	EPA 8081BM	0.001	0.002	76		5
Oxychlordane (mg/L)	02/2002	-	04/2005	EPA 8081AM	0.001	0.002	248		
	06/2005	-	06/2006	EPA 8081BM	0.001	0.002	81		
Tedion (mg/L)	02/2002	-	04/2005	EPA 8081AM	0.001	0.002	247	1	
	06/2005	-	06/2006	EPA 8081BM	0.001	0.002	81		
Organophosphate Pesticides									
Aspon (mg/L)	02/2002	-	06/2006	EPA 8141AM	0.03	0.05	329		
Azinphos ethyl (mg/L)	02/2002	-	06/2006	EPA 8141AM	0.03	0.05	329		
Azinphos methyl (mg/L)	02/2002	-	06/2006	EPA 8141AM	0.03	0.05	329		
Bolstar (mg/L)	02/2002	-	06/2006	EPA 8141AM	0.03	0.05	329		

Table B.3 (cont'd). Pesticides. Various methods, detection limits, reporting limits and number of samples in each detection category.

Analyte	Sampling Period	Method Name	MDL	RL	ND	DNQ	QV
Carbophenothion (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	329		
Chlorfenvinphos (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	329		
Chlorpyrifos (mg/L)	06/2001	EPA 8141A	0.5	0.5	4		
	02/2002 - 06/2006	EPA 8141AM	0.02	0.05	328	1	
Chlorpyrifos methyl (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.02	0.05	329		
Ciodrin (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	329		
Coumaphos (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.04	0.05	329		
Demeton-s (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.04	0.05	329		
Diazinon (mg/L)	06/2001	EPA 8141A	0.5	0.5	4		
	02/2002 - 06/2006	EPA 8141AM	0.005	0.02	293	21	15
Dichlofenthion (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	325	4	
Dichlorvos (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	329		
Dicrotophos (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	329		
Dimethoate (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	320	9	
Dioxathion (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	323	5	1
Disulfoton (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.01	0.05	319	10	
Ethion (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.02	0.05	328	1	
Ethoprop (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	329		
Famphur (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	328	1	
Fenchlorphos (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	329		
Fenitrothion (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	329		
Fensulfothion (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	329		
Fenthion (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	329		
Fonofos (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.02	0.05	324	5	
Leptophos (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	329		
Malathion (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	329		
Merphos (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	329		
Methidathion (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	328	1	
Mevinphos (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	329		
Molinate (mg/L)	02/2002 - 11/2005	EPA 8141AM	0.1	0.2	217		
	02/2005 - 06/2006	EPA 8141AM	0.02	0.05	98		
	09/2005	EPA 8141AM	0.03	0.05	14		
Naled (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	329		
Parathion, Ethyl (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	315		
	09/2005	EPA 8141AM	0.1	0.2	14		
Parathion, Methyl (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.01	0.05	327	2	
Phorate (mg/L)	02/2002 - 11/2005	EPA 8141AM	0.03	0.05	217		
	02/2005 - 06/2006	EPA 8141AM	0.05	0.1	112		
Phosmet (mg/L)	06/2001	EPA 8141A	1	1	4		
	02/2002 - 11/2005	EPA 8141AM	0.03	0.05	217		
	02/2005 - 06/2006	EPA 8141AM	0.05	0.1	98		
	09/2005	EPA 8141AM	0.05	0.05	14		

Table B.3 (cont'd). Pesticides. Various methods, detection limits, reporting limits and number of samples in each detection category.

Analyte	Sampling Period	Method Name	MDL	RL	ND	DNQ	QV
Phosphamidon (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	328	1	
Sulfotep (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	329		
Terbufos (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	329		
Tetrachlorvinphos (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	329		
Thiobencarb (mg/L)	02/2002 - 11/2005	EPA 8141AM	0.1	0.2	231		
	02/2005 - 06/2006	EPA 8141AM	0.02	0.05	98		
Thionazin (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.04	0.05	329		
Tokuthion (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	329		
Trichlorfon (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	329		
Trichloronate (mg/L)	02/2002 - 06/2006	EPA 8141AM	0.03	0.05	329		

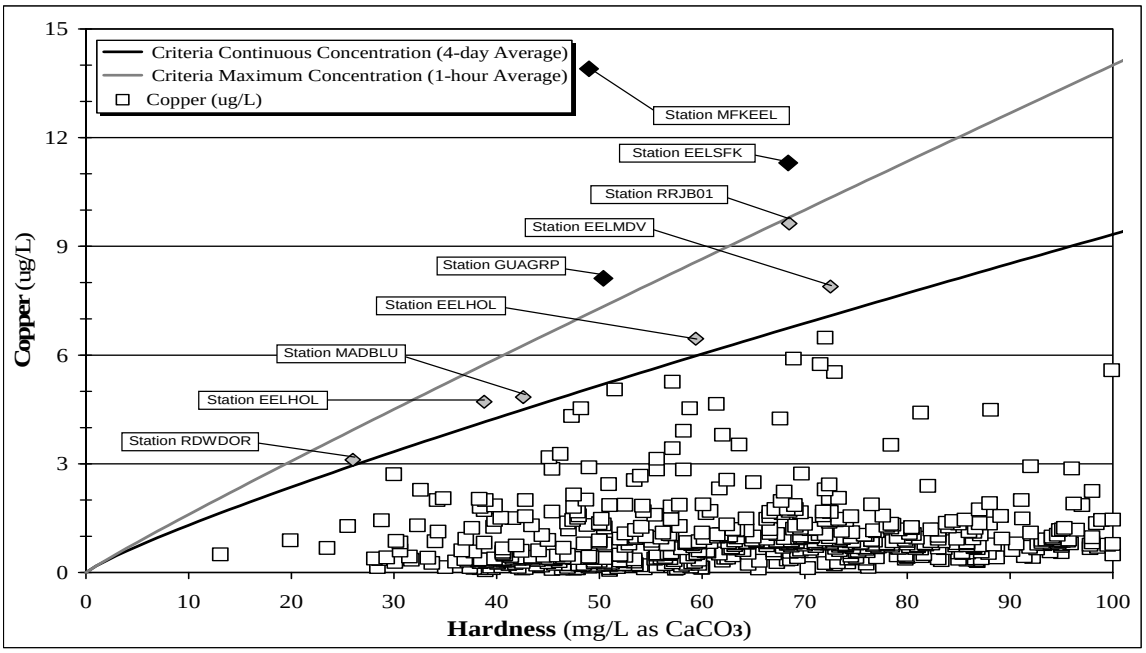
Table B.4. PCBs and Phenolic Compounds. Various methods, detection limits, reporting limits and number of samples in each detection category.

Analyte	Sampling Period	Method Name	MDL	RL	ND	DNQ	QV
PCB's (all) (mg/L)	02/2002 - 06/2006	EPA 8082M	0.001	0.002	16360	90	
Tetrachlorophenol -2,3,4,5 (mg/L)	02/2002 - 06/2002	EPA 604M	0.01	0.02	3	4	
Tetrachlorophenol -2,3,4,6 (mg/L)	02/2002 - 06/2002	EPA 604M	0.01	0.02	3	4	
Tetrachlorophenol -2,3,5,6 (mg/L)	02/2002 - 06/2003	EPA 604M	0.01	0.02	16	3	1
Pentachlorophenol (mg/L)	02/2002 - 06/2003	EPA 604M	0.005	0.01	16	2	2
Nonylphenol (mg/L)	10/2002 - 06/2006	JACR97_3247-3272	0.5	2	110	24	15
Nonylphenolethoxylate (mg/L)	10/2002 - 06/2006	JACR97_3247-3272	0.5	2	139	8	2

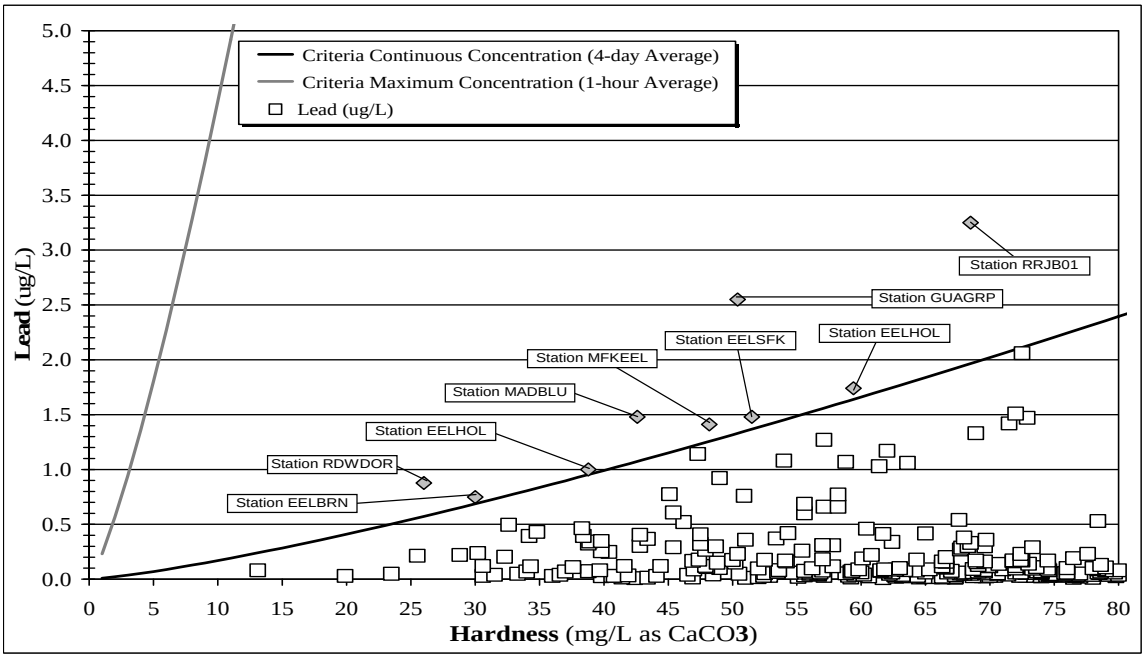
APPENDIX C.

Metals - Hardness

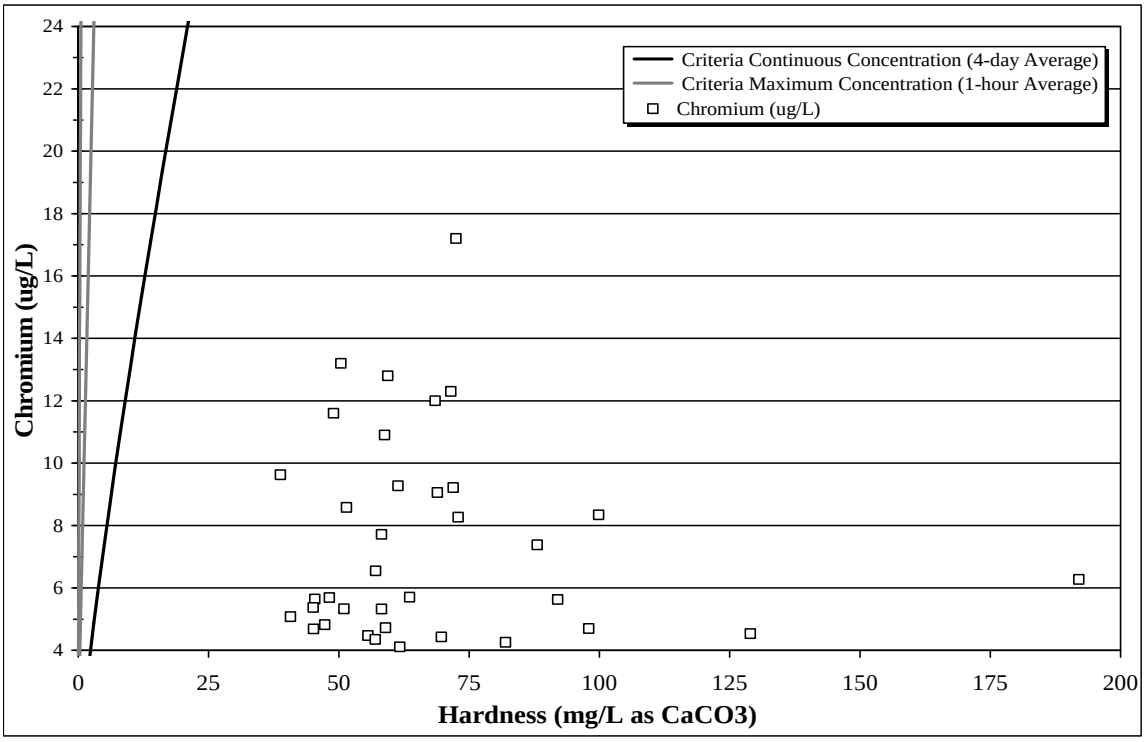
The following are graphs demonstrate the results of the trace metals sampling in the North Coast Region. The graphs are produced using the USEPA recommended criteria for freshwater aquatic life protection, based upon metals concentrations and hardness.



USEPA Recommended Criteria for Freshwater Aquatic Life Protection-Copper



USEPA Recommended Criteria for Freshwater Aquatic Life Protection –Lead



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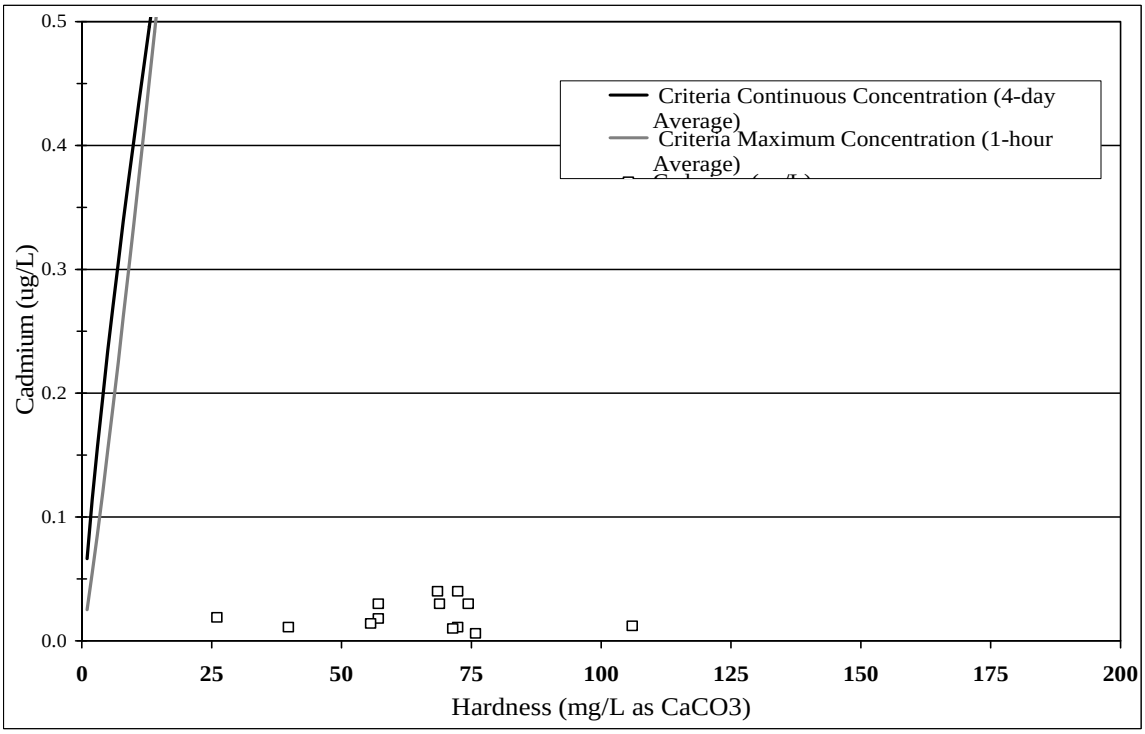

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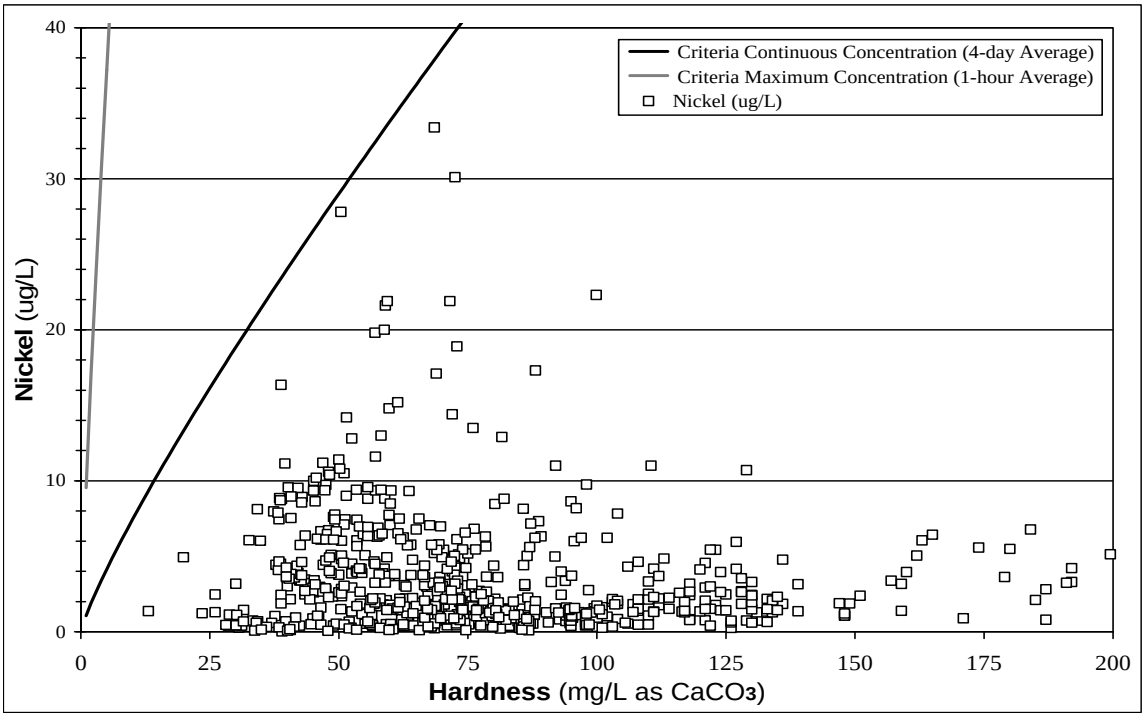
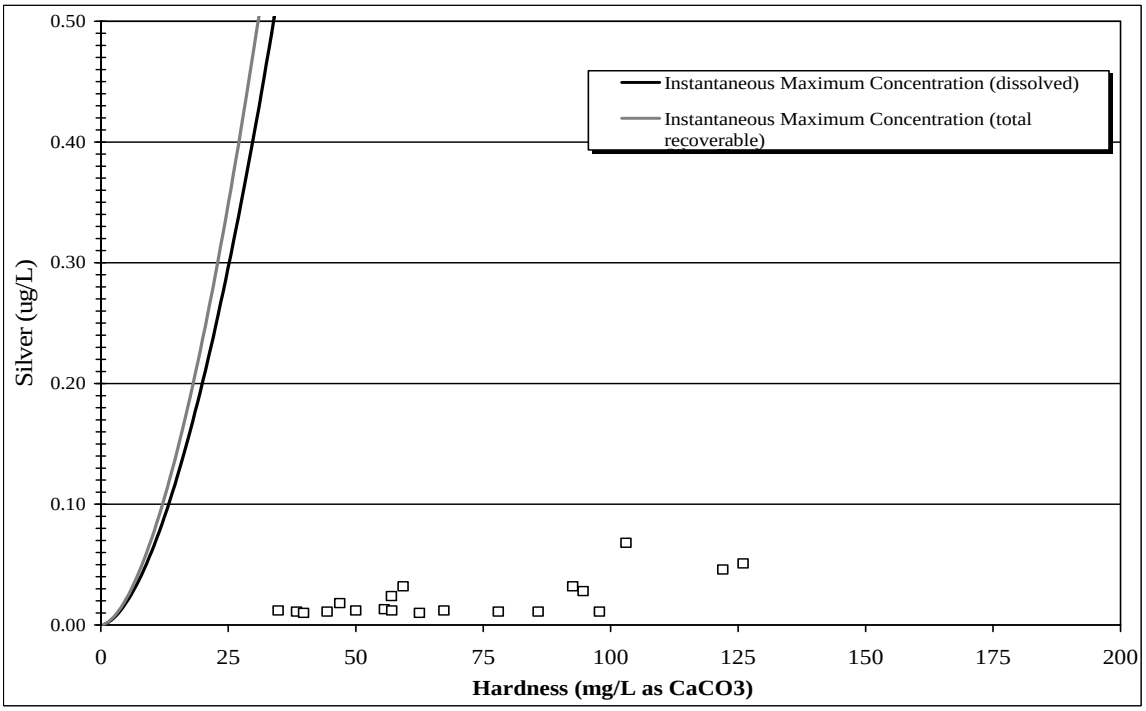
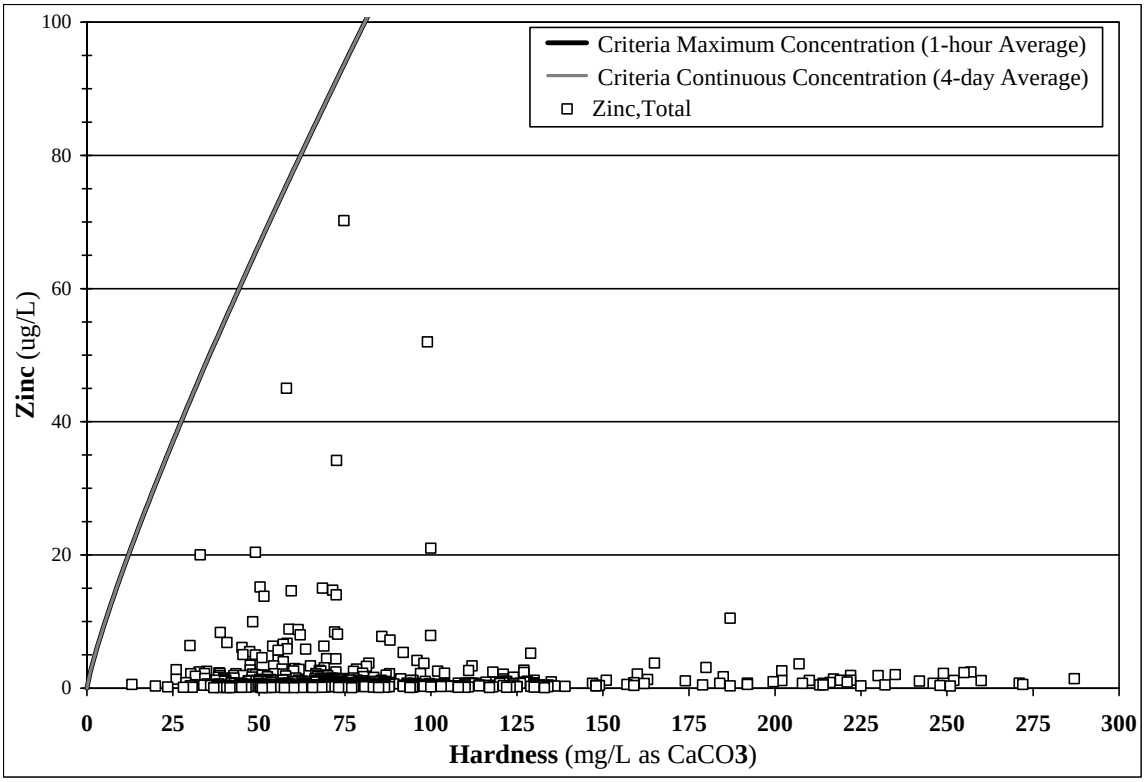


USEPA Recommended Criteria for Freshwater Aquatic Life Protection -Nickel



USEPA Recommended Criteria for Freshwater Aquatic Life Protection -Silver



USEPA Recommended Criteria for Freshwater Aquatic Life Protection -Zinc

APPENDIX D.

D.1._____Reviewer Comments:

(This report received one set of comments from one anonymous reviewer. Identified comments are noted with a superscript and responded to in Section D.2.)

"The authors are to be complimented for collecting and summarizing a very large and valuable data set. I surmise that this is likely to be an important source of water quality information for future investigators. It is in that light that I offer the following suggestions.

The introduction could be improved by clearly stating the purpose of the report. I assume, although I may be wrong, that the goals are stated in section 1.1.3.[1] They are:

1. Establish an ambient monitoring program that addresses all hydrologic units of the State using consistent and objective monitoring, sampling and analytical methods; consistent data quality assurance protocols; and centralized data management. Provide a comprehensive environmental monitoring program that monitors and interprets that data for each hydrologic unit at least one time every five years.

2. Document ambient water quality conditions in potentially clean and polluted areas. The scale for these assessments ranges from the site-specific to statewide.

3. Identify specific water quality problems preventing the SWRCB, RWQCB's, and the public from realizing beneficial uses of water in targeted watersheds.

4. Provide the data to evaluate the overall effectiveness of water quality regulatory programs in protecting beneficial uses of waters of the State.

If correct, then this report is goal #1 and it is largely met. As an aside, it might be helpful for the public to know where the raw data is stored and how it might be retrieved.[2]

It is less clear whether the document achieves goals #2, 3 and 4. Several points. First, I think it would be helpful if the document identified all the listed beneficial uses of each water body first and then evaluated the data in section #3 against the list of beneficial uses.[3] Presumably a "polluted" water body is one that does not meet its beneficial uses by exceeding either narrative or numerical water quality objectives. Not all beneficial uses may have been evaluated. For example, a water body may have a MUN or REC1 beneficial use but not have been evaluated for fecal coliform. This is OK but the

document should note which beneficial uses were not adequately evaluated, why and whether they should be addressed in future monitoring.

Second, another use of the data may be used to establish baseline values for future trend analysis or for comparison with other watersheds in the State. Section #3 of the document gives the number of times a numerical criteria is exceeded in a watershed but does not provide an estimate of the mean or median concentration. I suggest that each constituent analyzed in a watershed be evaluated to determine whether it exceeded a numerical objective or not by giving either the median or mean value and an estimate of the variation (either the standard error or 95 percent confidence limit). This will help future investigators determine whether concentrations are changing or not.[4] Many of the exceedance tables also contain footnotes, such as footnote number 2 for aluminum exceedances of the U.S. EPA CTS concentration in Table 10 on page 172 but there is no language below the table to inform the reader what the footnote refers to.[5] Finally, the units of each water quality objective should be included in each exceedance tables.[6]

Third, I found the narrative description of each watershed in Section Two fascinating and was particularly interested in the portions entitled "Water Quality Issues". I expected these to be supported by the water quality data contained in Section Three. However, the two sections seemed largely independent of each other.[7] For example, a common concern in Section Two was the degradation of habitat for salmonids but no empirical data supporting/refuting the beneficial loss was provided in Section Three. The document could be made more readable by first presenting Section Two for a specific watershed and then following it with Section Three and an analysis of whether the concerns identified in Section Two were or were not supported by the facts.[8]

Finally, the document would be improved with the inclusion of an Executive Summary and a Conclusion section. The summary should provide an overview of the report while the conclusion section should state the main points in the report and make recommendations for follow up work."[9]

D.2._____Response to Comments:

1) "The introduction could be improved by clearly stating the purpose of the report. I assume, although I may be wrong, that the goals are stated in section 1.1.3."

> ***The goals of the SWAMP in the North Coast Region are stated in section 1.1.2. "The SWAMP Goals in the North Coast Region FYs 2000-2006". These goals are to address regional and site-specific monitoring through the use of long-term monitoring sites for trend analysis, and rotating intensive basin surveys. These two approaches***

are more fully defined in sections 1.1.3. "Regional Monitoring" and 1.1.4. "Site-specific Monitoring".

2) "…it might be helpful for the public to know where the raw data is stored and how it might be retrieved."

All data collected and analyzed for this report are available to the public by contacting:

Rich Fadness
North Coast Regional Water Board
5550 Skylane Blvd #A
Santa Rosa, Ca 95403
707-576-6718
707-576-2220 (front desk)

All data will be uploaded to the CEDEN data network and available for download over the internet when that system becomes available.

3) "…it would be helpful if the document identified all the listed beneficial uses of each water body first and then evaluated the data in section #3 against the list of beneficial uses."

The determination of Beneficial Use support or impairment requires more site-specific evidence. The limited amount of data collected and analyzed does not lend itself to direct Beneficial Use determinations, but rather provides the background and direction to foster further studies.

To this end, the data collected and presented in this document lists the exceedances of various objectives and standards. With additional information at the site-specific level, determinations of Beneficial Use support can be made.

As additional data becomes available in subsequent years, this type of reporting will be employed when evaluating the data.

4) "I suggest that each constituent analyzed in a watershed be evaluated to determine whether it exceeded a numerical objective or not by giving either the median or mean value and an estimate of the variation (either the standard error or 95 percent confidence limit). This will help future investigators determine whether concentrations are changing or not."

A) "I suggest that each constituent analyzed in a watershed be evaluated to determine whether it exceeded a numerical objective or not…"

Tables 4 and 5 on pages 162 and 163 list the numeric values for the criteria, objectives, and standards utilized in this report for determining the exceedance of a standard or objective. For the constituents that are not listed, there are no criterion in which to compare the results and determine if an exceedance exists.

B) "… giving either the median or mean value and an estimate of the variation (either the standard error or 95 percent confidence limit). This will help future investigators determine whether concentrations are changing or not."

Due to the limited amount of sampling data collected at most locations (many with fewer than 5 site visits), and the seasonality of the data collected, statistical analysis of the data is not appropriate. As additional data becomes available in subsequent years, this type of analysis will be employed to evaluate the data.

5) "Many of the exceedance tables also contain footnotes, such as footnote number 2 for aluminum exceedances of the U.S. EPA CTS concentration in Table 10 on page 172 but there is no language below the table to inform the reader what the footnote refers to."

This oversight has been corrected in the tables throughout the report.

6) "…the units of each water quality objective should be included in each exceedance tables."

This oversight has been corrected in the tables throughout the report.

7) "…I found the narrative description of each watershed in Section Two fascinating and was particularly interested in the portions entitled "Water Quality Issues". I expected these to be supported by the water quality data contained in Section Three. However, the two sections seemed largely independent of each other."

> ***Section Two of the report is designed to present the background and current understanding of conditions present in the North Coast Region. The portions of Section Two entitled "Water Quality Issues" discuss known water quality issues in each watershed. It is not the intent of the regional SWAMP to address the issues noted, but to evaluate the overall health of the waterbodies in the Region.***
>
> ***A vast portion of the North Coast region has had little or no water quality investigative work. The Regional SWAMP focused on areas where the understanding of water quality was largely unknown. Sections One and Two are meant to provide the context under which the SWAMP monitoring was conducted in the North Coast region***

8) "The document could be made more readable by first presenting Section Two for a specific watershed and then following it with Section Three and an analysis of whether the concerns identified in Section Two were or were not supported by the facts."

> ***In the future, it is the intent of the authors to produce one report for each Hydrologic Unit sampled. This will address the Reviewer's comment and concern of readability and continuity.***

9) "Finally, the document would be improved with the inclusion of an Executive Summary and a Conclusion section. The summary should provide an overview of the report while the conclusion section should state the main points in the report and make recommendations for follow up work."

> ***In future iterations of this and other reports, the author will incorporate an executive summary and a conclusion section as noted in the reviewers comments.***