MRI

Title Analysis of Interstitial Water and Sediment for Surfactants by Liquid Chromatography/ Mass Spectrometry (LC/MS)

Final Report

For
The Soap and Detergent Association
1500 K Street, NW
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MRI Project No. 310428

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Preface

The following report presents results from the analysis of aqueous and sediment samples from three sampling events that was performed in accordance with MRI Proposal No. 811863, dated October 10, 2002. The samples were analyzed for the surfactants commonly referred to as alkyl ethoxylate (AE), alkyl sulfate/alkyl ethoxysulfate (AS/AES), and linear alkyl benzene sulfonate (LAS). Additional sediment samples (sediment fines) were analyzed for surfactants and other aqueous samples for elemental boron (B) analysis by subsequent change orders.

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Section 1.
Scope of Work

For this study, samples were collected over a period of September 16, 2003, to October 3, 2003, from three different wastewater treatment facilities and delivered to MRI for analysis. Based on communications with the field sampling team, the samples were collected as sediments and surface water samples, then preserved with formalin. The sediments were processed to separate out the interstitial (or pore) water from whole sediment for delivery to MRI as two separate samples. Interstitial water was further processed by the field sampling team to separate out suspended solids (referred to as "sediment fines") to produce an additional sample for analysis. A subset of the aqueous water samples was also collected, preserved with nitric acid, and submitted to MRI for elemental boron analysis.

The samples were packaged and shipped by overnight delivery to MRI laboratories in Kansas City, Missouri, and were received cold and in good condition. All surfactant sample extractions were initiated within 14 days of collection.

The samples included influent/effluent aqueous streams, sediments, surface water, interstitial water, and sediment fines (collected from centrifuged interstitial water). A complete list of the collected samples is presented in Table 1.

The samples were prepared and analyzed using MRI project-specific standard operating procedures (draft SOP Nos. 310428-1 and 310428-2) that were based on earlier validation studies. Briefly, separate portions of the aqueous samples were extracted for AE and AS/AES/LAS using solid-phase extraction (SPE), followed by elution and derivitization (AE only), then analyzed by liquid chromatography-mass spectrometry (LC-MS) under different operating conditions. Sediment samples were freeze-dried, extracted using different solvent schemes for AE and AS/AES/LAS, and also analyzed using separate LC-MS operating parameters. For AE in sediment, the sample extracts were processed through additional SPE cartridges for matrix cleanup, followed by derivatization, prior to analysis.

Because of the significant number of oligomers associated with surfactants, data from representative homologous classes (as indicated on subsequent tables) were processed. Additional data for related chemicals are available in electronic format for identification and quantitation if needed.

Standard reference materials of AE, LAS, AS/AES, and associated internal standards used in this study were previously characterized and provided by members of the SDA Task Force.

The ubiquity of surfactants in the environment and laboratory products makes it a difficult class of chemicals to determine at trace levels. MRI used a rigorous multistep cleanup process for all glassware to help minimize any background contaminants during sample preparation and analysis.

Section 2.
Results

Results of this study are presented in the following sections and referenced tables by type of analysis and matrix. Within each table, the samples are divided into test sites and listed in order of the general stream flow (e.g., upstream → influent → effluent → mixing zone → downstream → far downstream, etc.). Finally, related samples (e.g., pore water/surface water, sediment/sediment fines, and duplicated samples) are reported sequentially.

Data reduction for surfactants included:

- Development of chromatographic overlays to help assess chemical pattern recognition for each homologous series
- Examination of chromatograms generated for the individual mass ion channels for correct peak identification and response
- Qualitative assessment of data based on relative retention times derived from internal standards
- Calculation of sample results based on relative response (internal standard technique), initial/final sample volumes and weights, dilution factors, and unit conversions

Calibration data were generated using 5-point standard curves, except in a few cases where chromatographic interferences restricted the linear range. Calibration data were evaluated for linearity by calculating correlation coefficients. All initial calibration curves met calibration criteria (0.99), exhibiting correlation coefficients of 0.995 or better.

Sample results were calculated using relative response factors (RRF) instead of linear regression to avoid reporting negative values for data points that were below the lowest standard calibration point but above a detection limit of approximately 3:1 signal-to-noise response and met other qualitative criteria.

Reporting limits were established for each matrix and type of surfactant, as listed on subsequent tables. A reporting limit represents an equivalent sample concentration corresponding to the least concentrated calibration standard. Sample results that are below the calibrated range should be considered as estimated values.

Precision of the calibration factors were measured as relative standard deviation (RSD) for the average RRF. Precision of the individual chemical RRFs for AS/AES and LAS were better than 30% in all cases, while the AE calibration RRFs ranged from 7% to 55% RSD. The less precise values for some of the AE compounds may be attributed to the significant variations in chemical concentrations within the formulated reference material and chromatographic interferences for some chemicals. The impact on the data

is that sample results may be similarly affected and vary to lesser or more degree by chemical species and relative concentration.

Precision results are expressed in terms of ± range of the average for duplicate determinations and % relative standard deviation (RSD) for determinations of 3 or more (such as calibration factors).

Continuing calibration standards were injected after approximately every 10 sample injections to monitor instrument performance throughout the run. With a few exceptions, continuing calibration standards ranged from 70% to 130% difference from theoretical concentrations for the continuing calibration check standards.

2.1 Alkyl Ethoxylates (AE) Sample Results

Calibration for AE was performed using multi-component standard solutions. Individual stock standard solutions of GENEPOL® T-110 and NEODOL® 25-9 reference materials were prepared and mixed into a single working standard solution. In addition, individual fatty alcohols (C12 – C16, and C18) were prepared as stock solutions and combined into a single mixed alcohol standard solution. Calibration standards and quality control (QC) spiked samples were spiked with the GENEPOL/NEODOL mixture and also fortified with the mixed alcohol standard solution. This technique of using combined standard mixes is used to eliminate the need for a separate alcohol curve and because alcohols are typically the predominant species in environmental samples.

Sample results for AE (identified as $RO(CH_2CH_2O)_n$, where n is 0 or higher) are reported using the following convention: C# represents the alkyl carbon chain length (R) and EO=# represents the (n) degree of ethoxylation $(CH_2CH_2O)_n$.

As a quality control check on the accuracy of the calibration data, a second complete set of stock standards was prepared and analyzed. The accuracy of measured AE in the check standard generally ranged from 70% to 130% compared to theoretical values. One of the AE chemicals (C13, EO=2) co-eluted with a more substantial chromatographic interference, resulting in a high bias; data associated with this chemical are flagged as "<" or "interference" in the left column of the tables, indicating that this chemical may be present at or below the reported concentration (i.e., interference response).

Summaries of the standard ranges, calibration data, verification standard results, and reporting limits for AE are presented in Table 2.

2.1.1 Aqueous Samples

AE results for aqueous samples and associated method blanks are presented in Table 3. Method blanks are listed first, followed by samples grouped by site.

Method blanks are reagent water samples, included with each wastewater treatment facility sample set, that were taken through all sample preparation and analysis steps. Method blank results averaged < 140 ng/L for AE reported and, with few exceptions, less than the reporting limits for individual and combined AE generated from the standard data.

The mixing zone surface water from the Lowell site was sampled in duplicate. Precision results are also included in Table 3. Results for the field duplicate sample were comparable, generally within 10% difference.

Laboratory control sample (LCS) results are presented in Table 4. The LCS is a reagent water sample that is spiked with AE, then prepared and analyzed with each wastewater treatment facility sample set. The average recovery for the representative AE reported was ~ 43% ± 4% (standard deviation). The C14, C15, and C16 fatty alcohols and some of the lower ethoxlyated C18 oligomers were less than the 30% to 150% objective. Based on the observed LCS recoveries, analysis results for the water samples may also be higher than reported.

Results for the actual water samples varied significantly in found concentration, ranging from 2,500,000 ng/L for a diluted influent sample to less than 300 ng/L for an upstream sample.

Several of the samples (more noticeable on influents and some effluent samples) exhibited low responses for the internal standard chemicals, indicating possible ion suppression caused by the matrix. The use of a derivatized internal standard for calculation of native AE should help compensate for reduced response and allow mathematical correction for the observed AE concentrations in samples.

2.1.2 Sediment Samples

AE results for sediment samples and associated method blanks are presented in Table 5. Method blanks are listed first, followed by samples grouped by site. Method blanks for sediment samples consisted of solvents and reagents that were taken through all sample preparation and analysis steps. On average, method blanks were < 100 ng/g for AE reported, comparable to reporting limits.

The majority of the regular sediment samples were prepared and analyzed in duplicate. Only a few of the sediment fines were analyzed in duplicate because of limited amounts received. Precision results for the duplicate samples are included in the sample results table. Precision of the samples varied from ±1% to ±79% for AE reported. Sample results that showed higher variability may be due to the relatively low concentrations found (many of the sediment samples are not significantly different in total reported AE than the method blank) and physical variability of the matrix itself (e.g., sediment samples varied in consistency from clay to sandy, granular to small pebbles, etc.).

Laboratory control sample (LCS) results for the sediment samples are presented in Table 6. LCS samples were prepared using AE spiked extraction solvents prepared with wastewater treatment sample set. With few exceptions, average LCS recoveries met the objective of 50% to 150% recovery, ranging from 43% to 119%. Some of the AE chemicals that were spiked at less than 10 ng/g (ppb) did not recover well, resulting in concentrations that were less than the reporting limit.

Matrix spiked sample results are presented in Table 7. Matrix-spiked samples were prepared by fortifying upstream sediment samples with AE standard solutions and processing these QC samples for each associated sample set. Except for the Lowell sample set, only one matrix spiked sample was prepared with each sample set due to sample availability and the matrix spike duplicate for the Lowell sample was lost during sample preparation. Results for the matrix spiked samples were inconsistent at lower AE spiked concentrations (~ 4 to 8 times background for Wilmington and Bryan), but more consistent at higher spiked concentrations (~ 20 times background for Lowell). Results for the Lowell matrix spiked sample were consistent but low, ranging from 11% to 44% recovery.

Recoveries for the Wilmington matrix spiked sample were higher for the lower ethoxylates and fatty acids. Due to an oversight, this particular sample was spiked and refrigerated, but not freeze-dried until ~ 4 days later resulting in a longer contact time between the spiked AE and sediment; this may have contributed to a possible loss of the higher ethoxylated chemicals and increased concentrations of the lower ethoxylated chemicals and fatty alcohols.

Results for the sediment samples exhibited a wide distribution of concentrations (ranging from ~ 12,900 ng/g to less than 50 ng/g for total AE reported). Higher values for some of the sediment fines may, in part, be attributed to expected higher surface areas and smaller particle size of the matrix. Although the LCS data indicate good recovery (~ 43% to 119%) through the SPE and derivatization steps of the analysis, the limited matrix spike recovery data suggest that sample concentrations may be higher than reported.

Several of the sediment samples with smaller particle sizes, such as the sediment fines, presented difficulties during SPE cleanup steps due to clogging of the cartridge. More specifically, the second organic solvent extraction for all of the Bryan sediment fines and the Lowell upstream/discharge sediment fines and Lowell centrifuged sediments could not be passed through the top (C2) cartridge without plugging. However, the samples were processed through the lower (SAX and SCX) cartridges for matrix cleanup. Although results for these specific samples may have exhibited somewhat higher matrix interference, the original sediment extract fraction was intact and sample results should be minimally affected. For example, the Lowell upstream and downstream samples showed good precision (5% to 21% differences) between duplicated samples and significant differences in total AE concentration, ranging from ~ 1,500 ng/g to < 50 ng/g.

2.2 AS/AES and LAS Sample Results

Calibration for AS/AES and LAS were performed using individual stock standard solutions of formulated materials. The AS/AES formulation is identified as NEODOL 25-3S (Knavish) and the LAS reference standard is identified as a Low Molecular Weight LAS product with sample number VO146-105-1. Separate calibration curves and separate QC samples were prepared for the AS/AES and LAS surfactants to avoid saturation of the mass ion detector for co-eluting chemical. However, samples were analyzed concurrently for both classes of surfactants by establishing dual calibration curves with each run.

For this study, data from a representative subset of AS/AES chemicals were processed and LAS homologues were integrated and reported as a total area for the C10 through C14 series as indicated in subsequent tables. As with the AE data set, the full suite of AES surfactants is archived in electronic format for further processing if needed.

As a quality control check on the accuracy of the calibration data, a second complete set of stock standards was prepared and analyzed. The accuracy of the verification standard ranged from 95% to 115% for the LAS compounds and somewhat lower (59% to 68%) for the AS/AES check standard, compared to theoretical or gravimetric concentrations. The consistently lower values for the AS/AES check standard may be attributed to gravimetric difference between the stock standard used to prepare the calibration curve and the stock solution used to prepare the verification standard. Because there was a very limited amount of AES standard reference material available and the high viscosity of the material itself, calibration standards were prepared using an initial mass of ~ 30 mg and the check standard was prepared using a mass of ~ 15 mg standard (typically, ~ 100 mg masses were used to prepare stock standards for all other surfactant reference materials). The mass of standard was determined by gently warming the material to liquefy it, transferring a small portion to a volumetric flask, and then measuring the weight removed from the original vial. The calibration standard for AS/AES is considered more reliable due to the larger initial mass used in preparing the stock standard.

Summaries of the standard ranges, calibration data, verification standard results, and reporting limits for AS/AES and LAS are presented in Table 8.

The chemical structure of AES consists of an aliphatic hydrocarbon chain (listed as "C#"), connected to one or more ethoxylate groups (listed as "EO = #"), and terminated by a sulfate group. In some cases, multiple peaks (positional isomers) were observed for the AES compounds; only the dominant peak (identified from the calibration standards) was integrated and used to calculate sample results.

For LAS, results are reported as homologous series based on the degree of ethoxylation (C10 through C14 LAS). Each of these homologous series consists of a

varying number of positional isomers. For this study, the total peak area of exhibited peaks was integrated and used to calculate sample results.

2.2.1 Aqueous Samples

LAS and AS/AES results for the aqueous samples and associated method blanks are presented in Table 9. Method blanks are listed first, followed by samples grouped by site. Method blanks are reagent water samples that were included with each wastewater treatment facility sample set that were taken through all sample preparation and analysis steps. Method blank results averaged < 26 ng/L for LAS and < 23 ng/L for reported AES, less than the reporting limits derived from the standard data.

The mixing zone surface water from the Lowell site was sampled in duplicate. Precision results are also included in Table 9. Results for the field duplicate sample were generally comparable, ranging from 9% to 35% differences from the mean for LAS and AES, respectively. Several of the low-concentration AS results exhibited greater variability. Results for several laboratory duplicates, including an influent sample and several pore water samples, were very good—with differences of 1% and 17% from the average LAS and AS/AES concentrations, respectively.

LCS results are presented in Table 10. The LCS is an equivalent amount of reagent water spiked with AES or LAS that was prepared and analyzed with each wastewater treatment facility sample set. AES and LAS recoveries for the Lowell sample set were very low (< 1% for AES and < 10% for LAS). Results for subsequent samples sets from the Wilmington and Bryan facilities, produced better and more consistent recoveries (AES recoveries were ~ 20% and LAS recoveries were ~ 90%).

The cause of these apparent low recoveries was investigated and appears, in part, to be related to the proportional amount of methanol added to the aqueous sample as part of the spiking process (the Lowell sample set was spiked at a higher concentration of surfactants with 0.75 mL of methanol per a 200-mL aqueous sample, or ~ 0.4%, v/v; whereas the Wilmington and Bryan QC samples were spiked at ~ 1/5 this amount, or ~ 0.08%, v/v, methanol in water).

Subsequent experiments appear to confirm that the increased methanol in the spiking solution reduces recovery of surfactants. It is possible that this small amount of methanol may have caused elution of the surfactants from the C2 cartridge during the initial SPE extraction step.

Because none of the actual samples are fortified with standard solutions containing methanol, regular samples should not be affected. As part of this evaluation, the Lowell influent was re-extracted 25 days after the original extraction and analyzed with comparable results, as shown at the end of Table 10. Variances of 0% to 25% (for the least concentrated chemical) were observed between sample analyses.

Results of spiked samples (see Table 11) exhibited similar results to the LCS data, in that recoveries for added AS/AES were low ~ 10% to 20%, while recoveries for spiked LAS were near 90% to 100%.

Low recoveries may also have been affected by degradation of the QC spiking standard or physical loss during evaporation/concentration procedural steps, as discussed in Section 2.2.2.

Results for actual water samples varied significantly in measurable concentrations and chemical distribution. LAS concentrations ranged from 0 (nondetect) to ~ 4,000,000 ng/L and AES concentrations ranged from ~ 9 to ~ 200,000 ng/L.

2.2.2 Sediment Samples

LAS and AS/AES results for the sediment samples and associated method blanks are presented in Table 12. Method blanks are listed first, followed by samples grouped by site. Method blanks for sediment sample sets consisted of solvents and reagents that were taken through all sample preparation and analysis steps. On average, method blanks were 1 ng/g or less for both AES and LAS reported surfactants.

The majority of the regular sediment samples were prepared and analyzed in duplicate. Only a few of the sediment fines were analyzed in duplicate because of limited amounts received. Precision results for the duplicate samples are included in the sample results table and, with few exceptions, were within the objective of 30% difference from the average value found.

Laboratory control sample (LCS) results for the sediment samples are presented in Table 13. LCS samples were prepared using AES and LAS spiked extraction solvents prepared with wastewater treatment sample set. LCS recoveries were consistently good for LAS (~ 90%), but consistently low for the spiked AES compounds (~ 10% to 30%), similar to recoveries exhibited for the aqueous QC samples.

Because the sediment extracts are not processed through SPE columns and calibration standards are set at fixed concentrations by dilution only (no evaporation step), the cause of the low AES recoveries may be related to either the nitrogen evaporation step of the procedure or possibly due to degradation of the spiking standard itself. As part of the concentration step, 0.5 mL of isopropyl alcohol is added to the extract prior to evaporation using a nitrogen stream. This was effective for the LAS components, but may not have been as effective in retaining the AES compounds.

If the low recoveries were caused by degradation of the spiking solution, actual recoveries would be well within QC objectives of 50% to 130%, in line with previous experiments, and sample results would be unaffected.

Because of the wide range of concentrations observed for both LAS and AES, and generally good precision between replicate samples, method performance appears to be reasonable. It is possible that the spiking solution may have degraded, resulting in low recoveries relative to theoretical concentrations. Degradation of the AS/AES spiking solution was not anticipated, but would explain consistently low recoveries for spiked QC samples in both aqueous and sediments sample sets.

Matrix-spiked sample results are presented in Table 14. Matrix-spiked samples were prepared by fortifying upstream sediment samples with either AES or LAS standard solutions and processing these QC samples for each associated sample set. Except for the Lowell sample set, only one matrix-spiked sample was prepared with each sample set due to sample availability. Results for the matrix-spiked samples were consistent with the LCS sample results in that lower recoveries (~ 3% to 44%) were observed for the AES compounds and higher recoveries (64% to 135%) were observed for the LAS compounds.

Results for the sediment samples varied in found concentrations and distribution with generally higher values observed for the sediment fines. The higher values for the sediment fines may, in part, be attributed to expected higher surface areas and smaller particle size. Results for LAS varied from ~ 60 ng/g to ~ 5,000 ng/g and AES concentrations varied from 0 (nondetect) to ~ 200 ng/g.

2.3 Boron Results

Selected surface waters, influents and effluent samples from the three test sites were analyzed for boron. The samples were prepared for analysis using EPA Method 3010 (acid digestion) and analyzed by EPA Method 6010 (ICP-AES).

Quality control samples included a method blank that was found to be less than the reporting limit of 100 µg/L (less than the calibrated analytical range) and a laboratory control sample spiked at 1,000 µg/L that produced 97% recovery. The effluent sample from the Lowell site was also spiked, in duplicate, at 1,000 µg/L with similar (97%) recoveries.

Boron concentrations ranged from ~ 600 µg/L for several of the raw influent samples to less than 100 µg/L for upstream samples. The Lowell downstream samples were generally higher than comparable samples obtained from the Wilmington and Bryan sites.

Complete results of the boron analyses are presented in Table 15.

Section 3.
Quality Control/Quality Assurance (QA/QC)

The following quality assurance (QA) measures were incorporated into this study:

- Wherever possible, reagents and laboratory supplies were purchased as the same lot; mixed reagents were prepared in bulk for use throughout the study.
- Project records are archived at MRI; LC/MS data are archived both in electronic format and as a hardcopy of printed chromatograms.
- Sample traceability was established by use of unique sample codes.
- All samples were extracted within 14 days of collection.
- Calibration data were validated by analysis of an independent standard prepared from separate weighing of the neat chemical or formulation.
- Decontamination of all glassware per AE validation report, with the addition of an acid rinse for LAS and AS/AES glassware.
- Method performance was evaluated based on spiked reagent samples and spiked field samples.
- Precision was demonstrated by duplicate analysis of field samples, as appropriate.

Quality control (QC) measurements, objectives, and results are summarized in Table 16. The objectives are based on previous method applications and are intended for use in assessing the final results. Actual method performance is dependent on the variability of a specific environmental matrix and the significant concentration ranges exhibited of individual chemicals in the formulated reference standards.

Section 4.
Discussion

This study provides comprehensive results for surfactants and elemental boron in representative samples collected from three different wastewater treatment facilities. It presents characterization of process samples collected within the facility and environmental samples from both upstream and downstream sources.

The data were examined using a multistep evaluation process that included qualitative analysis of retention times and relative retention times (vs. internal standards), pattern recognition, and background contribution of the matrix.

The data reflect good results for calibrations, precision of replicate determinations, and demonstrate minimal background contribution from the laboratory operations.

The use of relative response factors and internal standards allowed the calculation of sample concentrations below reporting limits, down to ~ 3:1 signal-to-noise response, providing additional (semiquantitative) data for evaluation of distribution patterns and surfactant profiles.

The analytical methods used for this study were based on previously validated procedures and literature sources. These specific methods have previously been applied to a limited number of test samples under a reduced scope of work. Spiked recoveries of AE in sediment and possibly AES in sediment and water samples were low, indicating that reported concentrations may be higher than reported for these specific chemicals and associated matrices. However, analysis of duplicate samples indicates good precision for all classes of chemicals over a wide range of concentrations.

Preliminary assessment of the overall test results suggests potential correlations between relative concentrations of the different types of surfactants for samples taken from the same location. Further evaluation of these correlations may be more easily accomplished through a different format, such as a database program. There also appear to be consistent measurable differences between associated surface and pore waters and between centrifuged sediments and sediment fines, with generally higher surfactant concentrations observed for the pore waters and sediment fines.

Although this study was limited to reporting representative chemicals from AE and AES-type homologue classes, chromatographic profiles of each AE series with 0 to 15 degrees of ethoxylation were generated for pattern recognition purposes. These additional (non-reported) data points may be processed to further characterize AE profiles and oligomer distributions if needed. Similar processing of the non-reported AES chemicals may also be performed from archived electronic data files.

Table 1. Sample Receipt and Label Information

SAMPLE RECEIPT LIST -- LOWELL, INDIANA

SAMPLES RECEIVED 9/25/03, PACKED IN ICE (FROZEN) AND REFRIGERANT PACKS

MATRIX	SITE	SAMPLE CODE	DATE COLLECTED	TIME COLLECTED	SPECIFIED ANALYSIS	SAMPLER'S INITIALS	INDICATED PRESERVATION	BOTTLE TYPE	EST. VOLUME (OTHER LABEL INFORMATION)
WATER	LOWELL, IN - DISCHARGE	SURF. WATER - D	9/19/2003	9:25	AE	BP/MC	320 ML FORMALIN	AMBER GLASS	4-L
WATER	LOWELL, IN - DISCHARGE	SURF. WATER - D	9/19/2003	9:25	AS/AES/LAS	BP/MC	80 ML FORMALIN	CLEAR GLASS	1-L
SEDIMENT	LOWELL, IN - DISCHARGE	WHOLE SEDIMENT - D	9/19/2003	10:00	AE/AS/AES/LAS	BP	40 ML FORMALIN	PLASTIC JAR	1 PINT
SEDIMENT	LOWELL, IN - DISCHARGE	CENTRIFUGED SEDIMENT - D	9/19/2003	10:00	AE/AS/AES/LAS	BP	40 ML FORMALIN	PLASTIC JAR	1 PINT
WATER	LOWELL, IN - FAR DOWNSTREAM	SURF. WATER - F	9/18/2003	9:40	AE	BP/MC	320 ML FORMALIN	AMBER GLASS	4-L
WATER	LOWELL, IN - FAR DOWNSTREAM	SURF. WATER - F	9/18/2003	9:40	AS/AES/LAS	BP/MC	80 ML FORMALIN	CLEAR GLASS	1-L
SEDIMENT	LOWELL, IN - FAR DOWNSTREAM	WHOLE SEDIMENT - F	9/18/2003	9:40	AE/AS/AES/LAS	BP/MC	40 ML FORMALIN	PLASTIC JAR	1-PINT
SEDIMENT	LOWELL, IN - FAR DOWNSTREAM	CENTRIFUGED SEDIMENT - F	9/18/2003	9:40	AE/AS/AES/LAS	BP/MC	40 ML FORMALIN	PLASTIC JAR	1-PINT
WATER	LOWELL, IN - END OF MIXING	SURF WATER - M	9/18/2003	14:25	AE	BP	320 ML FORMALIN	AMBER GLASS	4-L
WATER	LOWELL, IN - END OF MIXING - DUP	SURF WATER - M - DUP	9/18/2003	14:20	AE	BP	320 ML FORMALIN	AMBER GLASS	4-L
WATER	LOWELL, IN - END OF MIXING	SURF WATER - M	9/18/2003	14:25	AS/AES/LAS	BP	80 ML FORMALIN	CLEAR GLASS	1-L
WATER	LOWELL, IN - END OF MIXING - DUP	SURF WATER - M - DUP	9/18/2003	14:20	AS/AES/LAS	BP	80 ML FORMALIN	CLEAR GLASS	1-L
SEDIMENT	LOWELL, IN - END OF MIXING	WHOLE SEDIMENT - M	9/18/2003	17:00	AE/AS/AES/LAS	BP	40 ML FORMALIN	PLASTIC JAR	1-PINT
SEDIMENT	LOWELL, IN - END OF MIXING	CENTRIFUGED SEDIMENT - M	9/18/2003	17:00	AE/AS/AES/LAS	BP	40 ML FORMALIN	PLASTIC JAR	1-PINT
WATER	LOWELL, IN - UPSTREAM	SURF WATER - U	9/19/2003	11:00	AE	BP	320 ML FORMALIN	AMBER GLASS	4-L
WATER	LOWELL, IN - UPSTREAM	SURF WATER - U	9/19/2003	11:00	AS/AES/LAS	BP	80 ML FORMALIN	CLEAR GLASS	1-L
SEDIMENT	LOWELL, IN - UPSTREAM	WHOLE SEDIMENT - U	9/19/2003	12:30	AE/AS/AES/LAS	BP	40 ML FORMALIN	PLASTIC JAR	1 PINT
SEDIMENT	LOWELL, IN - UPSTREAM	CENTRIFUGED SEDIMENT - U	9/19/2003	12:30	AE/AS/AES/LAS	BP	40 ML FORMALIN	PLASTIC JAR	1 PINT
WATER	LOWELL, IN - INFLUENT	STP INFLUENT - R	9/19/2003	11:00	AE	BBP	320 ML FORMALIN	AMBER GLASS	4-L
WATER	LOWELL, IN - EFFLUENT	STP EFFLUENT - E	9/19/2003	11:00	AE	BP	320 ML FORMALIN	AMBER GLASS	4-L
WATER	LOWELL, IN - EFFLUENT	STP EFFLUENT - E	9/19/2003	11:00	AS/AES/LAS	BP	80 ML FORMALIN	CLEAR GLASS	1-L
WATER	LOWELL, IN - HOTEL WATER	FIELD BLANK - B	9/18/2003	19:30	AE	BP	320 ML FORMALIN	AMBER GLASS	4-L
WATER	LOWELL, IN - HOTEL WATER	FIELD BLANK - B	9/18/2003	19:30	AS/AES/LAS	BP	80 ML FORMALIN	CLEAR GLASS	1-L
SAMPLES FOR BORON ANALYSES									
WATER	LOWELL, IN - DISCHARGE	SURF WATER - D	9/19/2003	9:25	BORON	BP/MC	0.5 ML HNO3	PLASTIC BOTTLE	250 ML
WATER	LOWELL, IN - HOTEL WATER	FIELD BLANK - B	9/18/2003	19:30	BORON	BP	0.5 ML HNO3	PLASTIC BOTTLE	250 ML
WATER	LOWELL, IN - EFFLUENT	STP EFFLUENT - E	9/19/2003	11:00	BORON	BP	0.5 ML HNO3	PLASTIC BOTTLE	250 ML
WATER	LOWELL, IN - FAR DOWNSTREAM	SURF WATER - F	9/18/2003	9:40	BORON	BP/MC	0.5 ML HNO3	PLASTIC BOTTLE	250 ML
WATER	LOWELL, IN - END OF MIXING	SURF WATER - M	9/18/2003	14:25	BORON	BP	0.5 ML HNO3	PLASTIC BOTTLE	250 ML
WATER	LOWELL, IN - END OF MIXING - DUP	SURF WATER - M - DUP	9/18/2003	14:25	BORON	BP	0.5 ML HNO3	PLASTIC BOTTLE	250 ML
WATER	LOWELL, IN - RAW INFLUENT	STP INFLUENT - R	9/19/2003	11:00	BORON	BP	0.5 ML HNO3	PLASTIC BOTTLE	250 ML
WATER	LOWELL, IN - UPSTREAM	SURF WATER - U	9/19/2003	11:00	BORON	BP	0.5 ML HNO3	PLASTIC BOTTLE	250 ML
ADDITIONAL SAMPLES RECEIVED ON 9/30/03 (INTERSTITIAL WATER)									
WATER	LOWELL, IN - DISCHARGE	PORE WATER - D	9/19/2003	10:30	AE	BP	320 ML FORMALIN	AMBER GLASS	4-L
WATER	LOWELL, IN - FAR DOWNSTREAM	PORE WATER - F	9/18/2003	9:40	AE	BP/MC	320 ML FORMALIN	AMBER GLASS	4-L
WATER	LOWELL, IN - END OF MIXING	PORE WATER - M	9/18/2003	14:25	AE	BP	320 ML FORMALIN	AMBER GLASS	4-L
WATER	LOWELL, IN - UPSTREAM	PORE WATER - U	9/19/2003	12:30	AE	BP	320 ML FORMALIN	AMBER GLASS	4-L
WATER	LOWELL, IN - DISCHARGE	PORE WATER - D	9/19/2003	10:30	AS/AES/LAS	BP	80 ML FORMALIN	CLEAR GLASS	1-L
WATER	LOWELL, IN - FAR DOWNSTREAM	PORE WATER - F	9/18/2003	9:40	AS/AES/LAS	BP/MC	80 ML FORMALIN	CLEAR GLASS	1-L
WATER	LOWELL, IN - END OF MIXING	PORE WATER - M	9/18/2003	14:25	AS/AES/LAS	BP	80 ML FORMALIN	CLEAR GLASS	1-L
WATER	LOWELL, IN - UPSTREAM	PORE WATER - U	9/19/2003	12:30	AS/AES/LAS	BP	320 ML FORMALIN * * AS INDICATED ON LABEL.	CLEAR GLASS	1-L
SEDIMENT	LOWELL, IN - DISCHARGE	CENTRIFUGED SEDIMENT FINES - D	9/19/2003	10:30	AE/AS/AES/LAS	BP	"AS SEPARATED 9/26/03"	CLEAR GLASS	100-ML (35 g/ 5 L)
SEDIMENT	LOWELL, IN - FAR DOWNSTREAM	CENTRIFUGED SEDIMENT FINES - F	9/19/2003	9:40	AE/AS/AES/LAS	BP/MC	"AS SEPARATED 9/26/03"	CLEAR GLASS	100-ML (87 g/ 5 L)
SEDIMENT	LOWELL, IN - END OF MIXING	CENTRIFUGED SEDIMENT FINES - M	9/19/2003	14:25	AE/AS/AES/LAS	BP	"AS SEPARATED 9/26/03"	CLEAR GLASS	100-ML (110 g / 5L
SEDIMENT	LOWELL, IN - UPSTREAM	CENTRIFUGED SEDIMENT FINES - U	9/19/2003	12:30	AE/AS/AES/LAS	BP	(nothing listed)	CLEAR GLASS	100-ML (93 g)

Table 1. Sample Receipt and Label Information (Continued)

SAMPLE RECEIPT LIST -- WILMINGTON, OHIO

SAMPLES RECEIVED 10/6/03, PACKED IN ICE (FROZEN) AND REFRIGERANT PACKS

MATRIX	SITE	SAMPLE CODE	DATE COLLECTED	TIME COLLECTED	SPECIFIED ANALYSIS	SAMPLER'S INITIALS	INDICATED PRESERVATION	BOTTLE TYPE	EST. VOLUME (OTHER LABEL INFORMATION)
WATER	WILMINGTON, OH - DOWNSTREAM	SURF. WATER - D	9/30/2003	11:55	AE	BP	320 ML FORMALIN	AMBER GLASS	4-L
WATER	WILMINGTON, OH - DOWNSTREAM	SURF. WATER - D	9/30/2003	11:55	AS/AES/LAS	BP	80 ML FORMALIN	CLEAR GLASS	1-L
SEDIMENT	WILMINGTON, OH - DOWNSTREAM	WHOLE SEDIMENT - D	9/30/2003	11:55	AE/AS/AES/LAS	BP	8 ML FORMALIN	CLEAR GLASS	100 - ML
SEDIMENT	WILMINGTON, OH - DOWNSTREAM	CENTRIFUGED SEDIMENT - D	9/30/2003	11:55	AE/AS/AES/LAS	BP	8 ML FORMALIN	CLEAR GLASS	100- ML
WATER	WILMINGTON, OH - FAR DOWNSTREAM	SURF. WATER - F	9/30/2003	9:00	AE	BP	320 ML FORMALIN	AMBER GLASS	4-L
WATER	WILMINGTON, OH - FAR DOWNSTREAM	SURF. WATER - F	9/30/2003	9:00	AS/AES/LAS	BP	80 ML FORMALIN	CLEAR GLASS	1-L
SEDIMENT	WILMINGTON, OH - FAR DOWNSTREAM	WHOLE SEDIMENT - F	9/30/2000	10:00	AE/AS/AES/LAS	BP	8 ML FORMALIN	CLEAR GLASS	100 ML
SEDIMENT	WILMINGTON, OH - FAR DOWNSTREAM	CENTRIFUGED SEDIMENT - F	9/30/2000	10:00	AE/AS/AES/LAS	BP	8 ML FORMALIN	CLEAR GLASS	100 ML
WATER	WILMINGTON, OH - END OF MIXING	SURF WATER - M	Not listed.	Not listed.	AE	Not listed.	320 ML FORMALIN	AMBER GLASS	4-L
WATER	WILMINGTON, OH - END OF MIXING	SURF WATER - M	9/30/2003	13:30	AS/AES/LAS	BP	80 ML FORMALIN	CLEAR GLASS	1-L
SEDIMENT	WILMINGTON, OH - END OF MIXING	WHOLE SEDIMENT - M	9/30/2003	13:30	AE/AS/AES/LAS	BP	8 ML FORMALIN	CLEAR GLASS	100 ML
SEDIMENT	WILMINGTON, OH - END OF MIXING	CENTRIFUGED SEDIMENT - M	9/30/2003	13:30	AE/AS/AES/LAS	BP	8 ML FORMALIN	CLEAR GLASS	100 ML
WATER	WILMINGTON, OH - UPSTREAM	SURF WATER - U	10/1/2003	9:10	AE	BP	320 ML FORMALIN	AMBER GLASS	4-L
WATER	WILMINGTON, OH - UPSTREAM	SURF WATER - U	10/1/2003	9:10	AS/AES/LAS	BP	80 ML FORMALIN	CLEAR GLASS	1-L
SEDIMENT	WILMINGTON, OH - UPSTREAM	WHOLE SEDIMENT - U	10/1/2003	9:30	AE/AS/AES/LAS	BP	8 ML FORMALIN	CLEAR GLASS	100 ML
SEDIMENT	WILMINGTON, OH - UPSTREAM	CENTRIFUGED SEDIMENT - U	10/1/2003	9:30	AE/AS/AES/LAS	BP	8 ML FORMALIN	CLEAR GLASS	100 ML
WATER	WILMINGTON, OH - RAW INFLUENT	STP INFLUENT - R	Not listed.	Not listed.	AE	NA	320 ML FORMALIN	AMBER GLASS	4-L
WATER	WILMINGTON, OH - EFFLUENT	STP EFFLUENT - E	10/1/2003	12:00	AE	BE	320 ML FORMALIN	AMBER GLASS	4-L
WATER	WILMINGTON, OH - EFFLUENT	STP EFFLUENT - E	10/1/2003	12:00	AS/AES/LAS	BE	80 ML FORMALIN	CLEAR GLASS	1-L
SAMPLES FOR BORON ANALYSES									
WATER	WILMINGTON, OH - DOWNSTREAM	SURF WATER - D	9/30/2003	11:55	BORON	BP	0.25 ML HNO3	PLASTIC BOTTLE	100 ML
WATER	WILMINGTON, OH - EFFLUENT	STP EFFLUENT - E	10/1/2003	12:00	BORON	BE	0.25 ML HNO3	PLASTIC BOTTLE	100 ML
WATER	WILMINGTON, OH - FAR DOWNSTREAM	SURF WATER - F	9/30/2003	9:00	BORON	BP	0.25 ML HNO3	PLASTIC BOTTLE	100 ML
WATER	WILMINGTON, OH - END OF MIXING	SURF WATER - M	9/30/2003	13:30	BORON	BP	0.25 ML HNO3	PLASTIC BOTTLE	100 ML
WATER	WILMINGTON, OH - UPSTREAM	SURF WATER - U	10/1/2003	NA	BORON	BP	0.25 ML HNO3	PLASTIC BOTTLE	100 ML
WATER	BRYAN, OH - UPSTREAM (Note: Corresponding Wilmington sample received with Bryan sample set.)	SURF WATER - U	10/3/2003	9:30	BORON	LD	"in lab"	PLASTIC BOTTLE	100 ML
WATER	WILMINGTON, OH - DOWNSTREAM	FINAL PORE WATER - D	9/30/2003	12:15	AE	BP	"AS COLLECTED"	AMBER GLASS	4-L
WATER	WILMINGTON, OH - FAR DOWNSTREAM	FINAL PORE WATER - F	9/30/2003	9:40	AE	BP	"AS COLLECTED"	AMBER GLASS	4-L
WATER	WILMINGTON, OH - END OF MIXING	FINAL PORE WATER - M	9/30/2003	13:50	AE	BP	"AS COLLECTED"	AMBER GLASS	4-L
WATER	WILMINGTON, OH - UPSTREAM	FINAL PORE WATER - U	10/1/2003	9:45	AE	BP	"AS COLLECTED"	AMBER GLASS	4-L
WATER	WILMINGTON, OH - DOWNSTREAM	FINAL PORE WATER - D	9/30/2003	12:15	AS/AES/LAS	BP	"AS COLLECTED"	CLEAR GLASS	1-L
WATER	WILMINGTON, OH - FAR DOWNSTREAM	FINAL PORE WATER - F	9/30/2003	9:40	AS/AES/LAS	BP	"AS COLLECTED"	CLEAR GLASS	1-L
WATER	WILMINGTON, OH - END OF MIXING	FINAL PORE WATER - M	9/30/2003	13:50	AS/AES/LAS	BP	"AS COLLECTED"	CLEAR GLASS	1-L
WATER	WILMINGTON, OH - UPSTREAM	FINAL PORE WATER - U	10/1/2003	9:10	AS/AES/LAS	BP	"AS COLLECTED"	CLEAR GLASS	1-L
SEDIMENT	WILMINGTON, OH - DOWNSTREAM	CENTRIFUGED SEDIMENT FINES - D	9/30/2003	12:15	AE/AS/AES/LAS	BP	"AS COLLECTED"	CLEAR GLASS	100-ML (17 g/ 5 L)
SEDIMENT	WILMINGTON, OH - FAR DOWNSTREAM	CENTRIFUGED SEDIMENT FINES - F	9/30/2003	9:40	AE/AS/AES/LAS	BP	"AS COLLECTED"	CLEAR GLASS	100-ML (19 g/ 5 L)
SEDIMENT	WILMINGTON, OH - END OF MIXING	CENTRIFUGED SEDIMENT FINES - M	9/30/2003	13:50	AE/AS/AES/LAS	BP	"AS COLLECTED"	CLEAR GLASS	100-ML (26 g / 5L)
SEDIMENT	WILMINGTON, OH - UPSTREAM	CENTRIFUGED SEDIMENT FINES - U	10/1/2003	9:10	AE/AS/AES/LAS	BP	"AS COLLECTED"	CLEAR GLASS	100-ML (49 g / 5 L)

Table 1. Sample Receipt and Label Information (Continued)

SAMPLE RECEIPT LIST – BRYAN OHIO

SAMPLES RECEIVED 10/9/03, PACKED IN ICE (FROZEN) AND REFRIGERANT PACKS

MATRIX	SITE	SAMPLE CODE	DATE COLLECTED	TIME COLLECTED	SPECIFIED ANALYSIS	SAMPLER'S INITIALS	INDICATED PRESERVATION	BOTTLE TYPE	EST. VOLUME (OTHER LABEL INFORMATION)
WATER	BRYAN, OH - DOWNSTREAM	SURF. WATER - D	10/2/2003	12:30	AE	LD	320 ML FORMALIN	AMBER GLASS	4-L
WATER	BRYAN, OH - DOWNSTREAM	SURF. WATER - D	10/2/2003	12:30	AS/AES/LAS	LD	80 ML FORMALIN	CLEAR GLASS	1-L
SEDIMENT	BRYAN, OH - DOWNSTREAM	WHOLE SEDIMENT - D	10/2/2003	12:30	AE/AS/AES/LAS	LD	8 ML FORMALIN	CLEAR GLASS	100 ML
SEDIMENT	BRYAN, OH - DOWNSTREAM	CENTRIFUGED SEDIMENT - D	10/2/2003	12:30	AE/AS/AES/LAS	LD	8 ML FORMALIN	CLEAR GLASS	100 ML
WATER	BRYAN, OH - FAR DOWNSTREAM	SURF. WATER - F	10/2/2003	9:30	AE	LD	320 ML FORMALIN	AMBER GLASS	4-L
WATER	BRYAN, OH - FAR DOWNSTREAM	SURF. WATER - F	10/2/2003	9:30	AS/AES/LAS	LD	80 ML FORMALIN	CLEAR GLASS	1-L
SEDIMENT	BRYAN, OH - FAR DOWNSTREAM	WHOLE SEDIMENT - F	10/2/2003	9:30	AE/AS/AES/LAS	LD	8 ML FORMALIN	CLEAR GLASS	100 ML
SEDIMENT	BRYAN, OH - FAR DOWNSTREAM	CENTRIFUGED SEDIMENT - F	10/2/2003	9:30	AE/AS/AES/LAS	LD	8 ML FORMALIN	CLEAR GLASS	100 ML
WATER	BRYAN, OH - END OF MIXING	SURF WATER - M	10/2/2003	15:15	AE	LD	320 ML FORMALIN	AMBER GLASS	4-L
WATER	BRYAN, OH - END OF MIXING	SURF WATER - M	10/2/2003	15:15	AS/AES/LAS	LD	80 ML FORMALIN	CLEAR GLASS	1-L
SEDIMENT	BRYAN, OH - END OF MIXING	WHOLE SEDIMENT - M	10/2/2003	15:15	AE/AS/AES/LAS	LD	8 ML FORMALIN	CLEAR GLASS	100 ML
SEDIMENT	BRYAN, OH - END OF MIXING	CENTRIFUGED SEDIMENT - M	10/2/2003	15:15	AE/AS/AES/LAS	LD	8 ML FORMALIN	CLEAR GLASS	100 ML
WATER	BRYAN, OH - UPSTREAM (SIDE STREAM COMPOSITE)	SURF WATER - U	10/3/2003	9:30	AE	LD	320 ML FORMALIN	AMBER GLASS	4-L
WATER	BRYAN, OH - UPSTREAM (SIDE STREAM COMPOSITE)	SURF WATER - U	10/3/2003	9:30	AS/AES/LAS	LD	80 ML FORMALIN	CLEAR GLASS	1-L
SEDIMENT	BRYAN, OH - UPSTREAM (SIDE STREAM COMPOSITE)	WHOLE SEDIMENT - U	10/3/2003	10:50	AE/AS/AES/LAS	LD	8 ML FORMALIN	CLEAR GLASS	100 ML
SEDIMENT	BRYAN, OH - UPSTREAM (SIDE STREAM COMPOSITE)	CENTRIFUGED SEDIMENT - U	10/3/2003	10:50	AE/AS/AES/LAS	LD	8 ML FORMALIN	CLEAR GLASS	100 ML
WATER	BRYAN, OH - RAW INFLUENT	STP INFLUENT - R	10/3/2003	12:30	AE	LD	320 ML FORMALIN	AMBER GLASS	4-L
WATER	BRYAN, OH - EFFLUENT	STP EFFLUENT - E	10/3/2003	12:30	AE	LD	320 ML FORMALIN	AMBER GLASS	4-L
WATER	BRYAN, OH - EFFLUENT	STP EFFLUENT - E	10/3/2003	12:30	AS/AES/LAS	LD	80 ML FORMALIN	CLEAR GLASS	1-L
SAMPLES FOR BORON ANALYSES									
WATER	BRYAN, OH - DOWNSTREAM	SURF WATER - D	10/2/2003	12:30	BORON	LD	"in lab"	PLASTIC BOTTLE	100 ML
WATER	BRYAN, OH - EFFLUENT	STP EFFLUENT - E	10/3/2003	12:30	BORON	LD	"in lab"	PLASTIC BOTTLE	100 ML
WATER	BRYAN, OH - FAR DOWNSTREAM	SURF WATER - F	10/2/2003	9:30	BORON	LD	"in lab"	PLASTIC BOTTLE	100 ML
WATER	BRYAN, OH - END OF MIXING	SURF WATER - M	10/2/2003	15:15	BORON	LD	"in lab"	PLASTIC BOTTLE	100 ML
WATER	BRYAN, OH - RAW INFLUENT	STP INFLUENT - R	10/3/2003	12:30	BORON	LD	"in lab"	PLASTIC BOTTLE	100 ML
WATER	WILMINGTON, OH - RAW INFLUENT (NO UPSTREAM BRYAN - BORON SAMPLE RECEIVED THIS DATE.)	STP INFLUENT - R	not listed	not listed	BORON	not listed	0.25 ML HNO3	PLASTIC BOTTLE	100 ML
WATER	BRYAN, OH - DOWNSTREAM	FINAL PORE WATER - D	10/2/2003	12:30	AE	LD	"AS COLLECTED"	AMBER GLASS	4-L
WATER	BRYAN, OH - FAR DOWNSTREAM	FINAL PORE WATER - F	10/2/2003	10:00	AE	LD	"AS COLLECTED"	AMBER GLASS	4-L
WATER	BRYAN, OH - END OF MIXING	FINAL PORE WATER - M	10/2/2003	15:45	AE	LD	"AS COLLECTED"	AMBER GLASS	4-L
WATER	BRYAN, OH - UPSTREAM	FINAL PORE WATER - U	10/3/2003	11:15	AE	LD	"AS COLLECTED"	AMBER GLASS	4-L
WATER	BRYAN, OH - DOWNSTREAM	FINAL PORE WATER - D	10/2/2003	12:30	AS/AES/LAS	LD	"AS COLLECTED"	CLEAR GLASS	1-L
WATER	BRYAN, OH - FAR DOWNSTREAM	FINAL PORE WATER - F	10/2/2003	10:00	AS/AES/LAS	LD	"AS COLLECTED"	CLEAR GLASS	1-L
WATER	BRYAN, OH - END OF MIXING	FINAL PORE WATER - M	10/2/2003	15:45	AS/AES/LAS	LD	"AS COLLECTED"	CLEAR GLASS	1-L
WATER	BRYAN, OH - UPSTREAM	FINAL PORE WATER - U	10/3/2003	11:15	AS/AES/LAS	LD	"AS COLLECTED"	CLEAR GLASS	1-L
SEDIMENT	BRYAN, OH - DOWNSTREAM	SEDIMENT FINES - D	10/2/2003	12:30	AE/AS/AES/LAS	LD	"AS COLLECTED"	CLEAR GLASS	100-ML (35 g/ 5 L)
SEDIMENT	BRYAN, OH - FAR DOWNSTREAM	SEDIMENT FINES - F	10/2/2003	10:00	AE/AS/AES/LAS	LD	"AS COLLECTED"	CLEAR GLASS	100-ML (170 G / 2.5 L)
SEDIMENT	BRYAN, OH - END OF MIXING	SEDIMENT FINES - M	10/2/2003	15:45	AE/AS/AES/LAS	LD	"AS COLLECTED"	CLEAR GLASS	100-ML (100 g / 5L)
SEDIMENT	BRYAN, OH - UPSTREAM	SEDIMENT FINES - U	10/3/2003	11:15	AE/AS/AES/LAS	LD	"AS COLLECTED"	CLEAR GLASS	100-ML (180 g / 5 L)

Table 2. AE Calibration Data and Reporting Limits

CHEMICAL ID	STD ID:	CONC'N (ug/mL) AE-10	AE-2	AE-0.5	AE-0.2	AE-0.1	AE-0	CORRELATION COEFFICIENT	CALIBRATION REL. RESPONSE FACTOR	CALIBRATION PRECISION (RSD)	% ACCURACY VS. CHECK STD. (File: 3K19Q009)	REPORTING LIMIT WATER (ng/L)	REPORTING LIMIT SEDIMENTS (ng/g)
C12 EO = 0		5.181	1.036	0.259	0.104	0.052	0.000	1.000	0.241	27	85	26	5.2
C12 EO = 1		0.495	0.099	0.025	0.010	0.005	0.000	1.000	0.182	29	85	2	0.5
C12 EO = 2		0.770	0.154	0.039	0.015	0.008	0.000	1.000	0.298	26	71	4	0.8
C12 EO = 3		1.125	0.225	0.056	0.022	0.011	0.000	0.999	0.391	22	68	6	1.1
C12 EO = 6		2.358	0.471	0.118	0.047	0.024	0.000	0.997	0.649	31	87	12	2.4
C12 EO = 9		3.349	0.670	0.167	0.067	0.033	0.000	1.000	0.929	34	98	17	3.3
C12 EO = 12		3.302	0.660	0.165	0.066	0.033	0.000	1.000	0.911	41	85	17	3.3
C12 EO = 15		2.161	0.432	0.108	0.043	0.022	0.000	1.000	0.899	35	90	11	2.2
C13 EO = 0		5.786	1.157	0.289	0.116	0.058	0.000	1.000	0.426	30	105	29	5.8
C13 EO = 1		0.512	0.102	0.026	0.010	0.005	0.000	0.995	0.188	29	184 (partial inter.)	3	0.5
C13 EO = 2		0.797	0.159	0.040	0.016	0.008	0.000	0.997	0.180	46	303 (interference)	4	0.8
C13 EO = 6		2.439	0.488	0.122	0.049	0.024	0.000	0.995	0.584	38	88	12	2.4
C13 EO = 9		3.468	0.694	0.173	0.069	0.035	0.000	0.998	1.336	51	133	17	3.5
C13 EO = 15		2.238	0.448	0.112	0.045	0.022	0.000	1.000	0.667	42	85	11	2.2
C14 EO = 0		4.977	0.995	0.249	0.100	0.050	0.000	1.000	0.232	26	71	25	5.0
C14 EO = 1		0.424	0.085	0.021	0.008	0.004	0.000	1.000	0.207	7	106	2	0.4
C14 EO = 2		0.660	0.132	0.033	0.013	0.007	0.000	1.000	0.250	29	95	3	0.7
C14 EO = 6		2.019	0.404	0.101	0.040	0.020	0.000	0.996	0.515	44	84	10	2.0
C14 EO = 9		2.871	0.574	0.144	0.057	0.029	0.000	1.000	0.837	41	86	14	2.9
C14 EO = 15		1.851	0.370	0.093	0.037	0.019	0.000	1.000	0.657	40	88	9	1.9
C15 EO = 0		4.917	0.983	0.246	0.098	0.049	0.000	1.000	0.354	23	109	25	4.9
C15 EO = 1		0.353	0.071	0.018	0.007	0.004	0.000	1.000	0.145	27	93	2	0.4
C15 EO = 2		0.550	0.110	0.027	0.011	0.005	0.000	0.998	0.204	22	65	3	0.5
C15 EO = 6		1.682	0.336	0.084	0.034	0.017	0.000	0.997	0.473	33	92	8	1.7
C15 EO = 9		2.392	0.478	0.120	0.048	0.024	0.000	1.000	0.748	44	92	12	2.4
C15 EO = 15		1.543	0.309	0.077	0.031	0.015	0.000	0.998	0.605	36	99	8	1.5
C16 EO = 0		5.329	1.066	0.266	0.107	0.053	0.000	0.999	0.196	26	76	27	5.3
C16 EO = 1		0.053	0.011	0.003	0.001	0.001	0.000	1.000	0.028	23	81	0.3	0.1
C16 EO = 2		0.149	0.030	0.007	0.003	0.001	0.000	0.999	0.077	45	78	1	0.1
C16 EO = 6		0.858	0.172	0.043	0.017	0.009	0.000	0.994	0.340	50	85	4	0.9
C16 EO = 9		1.786	0.357	0.089	0.036	0.018	0.000	0.999	0.851	48	75	9	1.8
C16 EO = 15		2.067	0.413	0.103	0.041	0.021	0.000	0.997	0.476	52	86	10	2.1
C18 EO = 0		6.098	1.220	0.305	0.122	0.061	0.000	1.000	0.203	23	90	30	6.1
C18 EO = 1		0.123	0.025	0.006	0.002	0.001	0.000	1.000	0.034	31	96	1	0.1
C18 EO = 2		0.359	0.072	0.018	0.007	0.004	0.000	0.999	0.094	43	83	2	0.4
C18 EO = 6		2.014	0.403	0.101	0.040	0.020	0.000	0.997	0.415	46	80	10	2.0
C18 EO = 9		4.203	0.841	0.210	0.084	0.042	0.000	1.000	0.823	45	84	21	4.2
C18 EO = 15		4.851	0.970	0.243	0.097	0.049	0.000	0.998	0.584	55	110	24	4.9

Note: Reporting limits are based on the lowest standard. AE results are reported down to 3:1 signal-to-noise as estimated values in the following tables using the average relative response factor.

SITE FIELD ID MATRIX ANALYSIS SEQUENCE FILE NAME LAB ID SAMPLE VOLUME (L)	REPORTING LIMIT WATER	LOWELL METHOD BLANK WATER 6 3K13Q006 AE-4-W Lowell QC-MB 2A 4.0	WILMINGTON METHOD BLANK WATER 5 3K13Q005 AE-3-W Wilmington QC-MB 2A 4.0	BRYAN METHOD BLANK WATER 7 3K13Q007 AE-5-W Bryon QC-MB 2A 4.0	AVERAGE BLANK (ng/L)	PRECISION (+/- 1 Std. Dev.) (ng/L)
Sample concentration (ng/L)						
C12 EO = 0	25.9	10.4	12.2	7.7	10.1	2.3
C12 EO = 1	2.5	2.6	4.3	1.2	2.7	1.5
C12 EO = 2	3.9	2.1	5.0	1.7	2.9	1.8
C12 EO = 3	5.6	1.0	2.6	1.2	1.6	0.8
C12 EO = 6	11.8	0.0	0.0	0.0	0.0	0.0
C12 EO = 9	16.7	0.0	0.0	0.0	0.0	0.0
C12 EO = 12	16.5	0.0	0.0	0.0	0.0	0.0
C12 EO = 15	10.8	0.0	0.0	0.0	0.0	0.0
C13 EO = 0	28.9	0.0	2.3	2.0	1.4	1.3
C13 EO = 1	2.6	0.0	0.0	0.0	0.0	0.0
C13 EO = 2 (< INTERFERENCE)	4.0	76.2	70.4	68.9	71.9	3.8
C13 EO = 6	12.2	0.0	0.0	0.0	0.0	0.0
C13 EO = 9	17.3	0.0	0.0	0.0	0.0	0.0
C13 EO = 15	11.2	0.0	0.0	0.0	0.0	0.0
C14 EO = 0	24.9	2.9	2.9	2.2	2.7	0.4
C14 EO = 1	2.1	0.0	0.7	0.0	0.2	0.4
C14 EO = 2	3.3	0.0	0.5	0.0	0.2	0.3
C14 EO = 6	10.1	0.0	0.0	1.7	0.6	1.0
C14 EO = 9	14.4	0.0	0.0	0.0	0.0	0.0
C14 EO = 15	9.3	0.0	0.0	0.0	0.0	0.0
C15 EO = 0	24.6	0.0	1.0	0.0	0.3	0.6
C15 EO = 1	1.8	0.0	0.0	0.0	0.0	0.0
C15 EO = 2	2.7	0.0	0.0	0.0	0.0	0.0
C15 EO = 6	8.4	0.0	0.0	0.0	0.0	0.0
C15 EO = 9	12.0	0.0	0.0	0.0	0.0	0.0
C15 EO = 15	7.7	0.0	0.0	0.0	0.0	0.0
C16 EO = 0	26.6	6.4	5.3	3.3	5.0	1.5
C16 EO = 1	0.3	0.0	0.0	0.0	0.0	0.0
C16 EO = 2	0.7	0.0	0.0	0.0	0.0	0.0
C16 EO = 6	4.3	0.0	0.8	0.0	0.3	0.4
C16 EO = 9	8.9	0.0	1.7	0.0	0.6	1.0
C16 EO = 15	10.3	0.0	5.5	0.0	1.8	3.2
C18 EO = 0	30.5	18.7	21.2	16.7	18.8	2.3
C18 EO = 1	0.6	0.0	0.0	0.0	0.0	0.0
C18 EO = 2	1.8	0.0	0.0	0.0	0.0	0.0
C18 EO = 6	10.1	1.3	0.9	0.5	0.9	0.4
C18 EO = 9	21.0	4.3	3.6	2.1	3.3	1.2
C18 EO = 15	24.3	15.2	15.3	5.5	12.0	5.6
TOTAL AE (OF ABOVE)	431	141	156	115	137	21

Note: "0.0" = non-detected.

Table 3. AE Method Blank and Aqueous Sample Results (Continued)

SITE	LOWELL, IN - HOTEL WATER	LOWELL, IN - UPSTREAM	LOWELL, IN - UPSTREAM	LOWELL, IN - INFLUENT	LOWELL, IN - EFFLUENT	LOWELL, IN - DISCHARGE
FIELD ID	FIELD BLANK - B	SURF WATER - U	PORE WATER - U	STP INFLUENT - R	STP EFFLUENT - E	SURF. WATER - D
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER
ANALYSIS SEQUENCE	8	11	14	20	15	16
FILE NAME	3K13Q008	3K13Q011	3K13Q014	3K14Q020	3K14Q015	3K13Q016
LAB ID	AE-6-W Lowell Surf Water FB 2A	AE-9-W Lowell Surf Water-U 2A	AE-11-W Lowell Pore Water-U 2A	AE-37-W Lowell Surf Water-INF	AE-32-W Lowell Surf Water-EFF	AE-13-W Lowell Surf Water-D 2A
SAMPLE VOLUME (L)	4.0	4.0	4.0	1	4.0	4.0
Sample concentration (ng/L)						
C12 EO = 0	73.7	38.0	26.5	409565	160.0	39.6
C12 EO = 1	4.1	4.2	9.8	7570	71.3	5.4
C12 EO = 2	0.0	0.0	92.6	8241	77.0	4.8
C12 EO = 3	0.0	0.0	42.4	940	381.2	5.5
C12 EO = 6	0.0	0.0	0.0	13487	0.0	0.0
C12 EO = 9	0.0	0.0	0.0	16378	0.0	0.0
C12 EO = 12	0.0	0.0	0.0	14502	445.9	0.0
C12 EO = 15	0.0	0.0	0.0	8883	1808.8	0.0
C13 EO = 0	0.0	0.0	24.9	268548	0.0	0.0
C13 EO = 1	0.0	0.0	0.0	3055	0.0	0.0
C13 EO = 2 (< INTERFERENCE)	67.7	71.7	85.4	9207	76.6	89.2
C13 EO = 6	0.0	0.0	0.0	5158	0.0	0.0
C13 EO = 9	0.0	0.0	0.0	9714	0.0	0.0
C13 EO = 15	0.0	0.0	0.0	2507	0.0	0.0
C14 EO = 0	0.0	0.0	18.0	277354	0.0	7.1
C14 EO = 1	0.0	0.0	0.0	5269	0.0	0.0
C14 EO = 2	0.0	0.0	0.0	8693	0.0	0.0
C14 EO = 6	0.0	0.0	0.0	11393	0.0	0.0
C14 EO = 9	0.0	0.0	0.0	17295	0.0	0.0
C14 EO = 15	0.0	0.0	0.0	7456	0.0	0.0
C15 EO = 0	0.0	0.0	13.7	254289	385.5	0.0
C15 EO = 1	0.0	0.0	0.0	2853	0.0	0.0
C15 EO = 2	0.0	0.0	0.0	3709	0.0	0.0
C15 EO = 6	0.0	0.0	0.0	2591	0.0	0.0
C15 EO = 9	0.0	0.0	0.0	5375	0.0	0.0
C15 EO = 15	0.0	0.0	0.0	2178	0.0	0.0
C16 EO = 0	200.8	68.7	25.1	505280	35.5	121.9
C16 EO = 1	0.0	0.0	0.0	417	0.0	0.0
C16 EO = 2	0.0	0.0	0.0	1146	0.0	0.0
C16 EO = 6	0.0	0.0	0.0	3059	0.0	0.0
C16 EO = 9	0.0	0.0	0.0	7221	0.0	0.0
C16 EO = 15	0.0	0.0	0.0	1845	0.0	0.0
C18 EO = 0	32.3	57.6	52.1	817496	352.2	56.7
C18 EO = 1	0.0	0.0	0.0	120	0.0	0.0
C18 EO = 2	0.0	0.0	0.0	571	0.0	0.0
C18 EO = 6	0.0	0.0	0.0	1078	0.0	0.0
C18 EO = 9	0.0	0.0	0.0	1831	0.0	0.0
C18 EO = 15	0.0	0.0	0.0	711	0.0	0.0
TOTAL AE (OF ABOVE)	**379**	**240**	**391**	**2516783**	**3794**	**330**

Note: "0.0" = non-detected.

SITE	LOWELL, IN - DISCHARGE	LOWELL, IN - END OF MIXING	FIELD DUPLICATE LOWELL, IN - END OF MIXING - DUP			LOWELL, IN - END OF MIXING	LOWELL, IN - FAR DOWNSTREAM
FIELD ID	PORE WATER - D	SURF WATER - M	SURF WATER - M - DUP			PORE WATER - M	SURF. WATER - F
MATRIX	WATER	WATER	WATER			WATER	WATER
ANALYSIS SEQUENCE	21	15	17	FIELD		22	18
FILE NAME	3K13Q021	3K13Q015	3K13Q017	DUPLICATE	PRECISION	3K13Q022	3K13Q018
LAB ID	AE-18-W Lowell Pore Water-D 2A	AE-12-W Lowell Surf Water-M 2A	AE-14-W Lowell Surf Water-M-Du	AVERAGE	(+/- Range)	AE-19-W Lowell Pore Water-M 2A	AE-15-W Lowell Surf Water-F 2A
SAMPLE VOLUME (L)	4.0	4.0	4.0	(ng/L)	(ng/L)	4.0	4.0
Sample concentration (ng/L)							
C12 EO = 0	66.9	33.2	40.3	36.8	3.5	30.2	37.4
C12 EO = 1	18.5	6.9	5.3	6.1	0.8	8.6	5.2
C12 EO = 2	36.4	17.9	7.5	12.7	5.2	69.9	0.0
C12 EO = 3	29.5	14.0	4.8	9.4	4.6	13.1	0.0
C12 EO = 6	27.9	0.0	0.0	0.0	0.0	4.5	0.0
C12 EO = 9	1.9	0.0	0.0	0.0	0.0	3.1	0.0
C12 EO = 12	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C12 EO = 15	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C13 EO = 0	15.5	0.0	0.0	0.0	0.0	4.0	0.0
C13 EO = 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C13 EO = 2 (< INTERFERENCE)	78.9	92.5	75.3	83.9	8.6	64.8	74.3
C13 EO = 6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C13 EO = 9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C13 EO = 15	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C14 EO = 0	19.1	0.0	6.4	3.2	3.2	14.0	11.7
C14 EO = 1	4.2	0.0	0.0	0.0	0.0	0.0	0.0
C14 EO = 2	5.9	0.0	0.0	0.0	0.0	0.0	0.0
C14 EO = 6	3.0	0.0	0.0	0.0	0.0	0.0	0.0
C14 EO = 9	3.0	0.0	0.0	0.0	0.0	0.0	0.0
C14 EO = 15	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C15 EO = 0	6.9	0.0	0.0	0.0	0.0	9.7	0.0
C15 EO = 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C15 EO = 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C15 EO = 6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C15 EO = 9	0.0	0.0	43.1	21.5	21.5	0.0	0.0
C15 EO = 15	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C16 EO = 0	48.0	70.2	80.3	75.3	5.0	12.5	107.6
C16 EO = 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C16 EO = 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C16 EO = 6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C16 EO = 9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C16 EO = 15	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C18 EO = 0	37.1	28.9	65.7	47.3	18.4	32.6	89.7
C18 EO = 1	0.0	0.0	0.0	0.0	0.0	0.1	0.0
C18 EO = 2	0.0	0.0	0.0	0.0	0.0	4.7	0.0
C18 EO = 6	0.0	0.0	0.0	0.0	0.0	1.0	0.0
C18 EO = 9	1.3	0.0	0.0	0.0	0.0	1.7	0.0
C18 EO = 15	11.6	0.0	0.0	0.0	0.0	13.9	0.0
TOTAL AE (OF ABOVE)	**416**	**264**	**329**	**296**	**33**	**288**	**306**

Note: "0.0" = non-detected.

Table 3. AE Method Blank and Aqueous Sample Results (Continued)

SITE	LOWELL, IN - FAR DOWNSTREAM	WILMINGTON, OH - UPSTREAM	WILMINGTON, OH - UPSTREAM	WILMINGTON, OH - RAW INFLUENT	WILMINGTON, OH - EFFLUENT
FIELD ID	PORE WATER - F	SURF WATER - U	FINAL PORE WATER - U	STP INFLUENT - R	STP EFFLUENT - E
MATRIX	WATER	WATER	WATER	WATER	WATER
ANALYSIS SEQUENCE	19	10	12	9	8
FILE NAME	3K13Q019	3K14Q010	3K14Q012	3K13Q009	3K14Q008
LAB ID	AE-18-W Lowell Pore Water-F 2A	AE-28-W Wilmington Surf Water-U	AE-30-W Wilmington Pore Water-U	AE-7-W Wilmington Surf Water-I	AE-26-W Wilmington Surf Water-EFF
SAMPLE VOLUME (L)	4.0	4.3	4.1	1	4.3
Sample concentration (ng/L)					
C12 EO = 0	585.0	57.4	60.1	30040	97.2
C12 EO = 1	0.0	5.7	29.3	5434	44.1
C12 EO = 2	0.0	0.0	64.0	4872	65.2
C12 EO = 3	0.0	0.0	43.6	8210	53.3
C12 EO = 6	0.0	0.0	6.6	3735	26.4
C12 EO = 9	0.0	0.0	2.6	14292	11.6
C12 EO = 12	0.0	0.0	4.2	13344	6.5
C12 EO = 15	0.0	0.0	3.1	8909	0.0
C13 EO = 0	1264.5	0.0	18.6	19527	24.7
C13 EO = 1	0.0	0.0	0.0	3032	0.0
C13 EO = 2 (< INTERFERENCE)	243.4	88.0	75.3	1297	61.3
C13 EO = 6	0.0	0.0	0.0	4058	0.0
C13 EO = 9	0.0	332.5	0.0	9913	0.0
C13 EO = 15	0.0	0.0	0.0	3672	0.0
C14 EO = 0	1388.4	9.0	18.0	21067	56.0
C14 EO = 1	0.0	0.0	2.6	4199	24.3
C14 EO = 2	0.0	0.0	10.7	2272	34.0
C14 EO = 6	0.0	88.1	1.3	8759	17.7
C14 EO = 9	0.0	406.3	2.9	14364	11.0
C14 EO = 15	0.0	0.0	0.0	7499	0.0
C15 EO = 0	1218.8	0.0	9.7	20808	86.0
C15 EO = 1	0.0	0.0	0.0	1784	1.7
C15 EO = 2	0.0	0.0	9.9	923	41.0
C15 EO = 6	0.0	0.0	0.0	2324	0.0
C15 EO = 9	0.0	0.0	0.0	2817	0.0
C15 EO = 15	0.0	0.0	0.0	1395	0.0
C16 EO = 0	1856.8	48.0	33.0	44976	116.0
C16 EO = 1	0.0	0.0	0.0	189	0.0
C16 EO = 2	0.0	0.0	0.0	330	0.0
C16 EO = 6	0.0	0.0	0.0	1687	0.0
C16 EO = 9	0.0	0.0	0.0	3088	0.0
C16 EO = 15	0.0	0.0	0.0	1150	0.0
C18 EO = 0	361.7	77.0	45.6	43701	400.1
C18 EO = 1	0.0	0.0	0.0	115	0.6
C18 EO = 2	0.0	0.0	0.0	207	2.3
C18 EO = 6	0.0	0.0	0.9	755	0.0
C18 EO = 9	0.0	0.0	2.6	1120	0.0
C18 EO = 15	0.0	0.0	13.7	900	0.0
TOTAL AE (OF ABOVE)	**6897**	**1112**	**458**	**316364**	**1181**

Note: "0.0" = non-detected.

Table 3. AE Method Blank and Aqueous Sample Results (Continued)

SITE	WILMINGTON, OH - END OF MIXING	WILMINGTON, OH - END OF MIXING	WILMINGTON, OH - DOWNSTREAM	WILMINGTON, OH - DOWNSTREAM	WILMINGTON, OH - FAR DOWNSTREAM
FIELD ID	SURF WATER - M	FINAL PORE WATER - M	SURF. WATER - D	FINAL PORE WATER - D	SURF. WATER - F
MATRIX	WATER	WATER	WATER	WATER	WATER
ANALYSIS SEQUENCE	21	19	3	6	7
FILE NAME	3K14Q021	3K14Q019	3K14Q003	3K14Q006	3K14Q007
LAB ID	AE-38-W Wilmington Surf Water-M	AE-38-W Wilmington Pore Water-M	AE-21-W Wilmington Surf Water-D	AE-24-W Wilmington Pore Water-D	AE-25-W Wilmington Surf-F
SAMPLE VOLUME (L)	4.2	4.2	4.1	4.1	3.8
Sample concentration (ng/L)					
C12 EO = 0	30.5	80.7	57.5	248.3	43.9
C12 EO = 1	27.1	38.7	48.5	61.4	54.6
C12 EO = 2	58.2	85.8	78.7	92.2	92.4
C12 EO = 3	67.2	63.8	48.9	83.4	70.6
C12 EO = 6	26.6	26.8	25.2	33.4	19.2
C12 EO = 9	13.2	4.5	9.7	5.5	8.5
C12 EO = 12	0.0	0.0	11.6	0.0	4.0
C12 EO = 15	0.0	0.0	12.3	0.0	0.0
C13 EO = 0	23.1	32.6	26.8	40.1	13.3
C13 EO = 1	0.0	7.0	0.0	0.0	0.0
C13 EO = 2 (< INTERFERENCE)	64.3	68.1	67.7	77.1	74.6
C13 EO = 6	0.0	0.0	0.0	0.0	0.0
C13 EO = 9	0.0	0.0	0.0	0.0	0.0
C13 EO = 15	0.0	0.0	0.0	0.0	0.0
C14 EO = 0	24.0	21.0	38.0	61.0	21.0
C14 EO = 1	15.3	3.9	19.9	7.8	21.9
C14 EO = 2	19.2	6.3	39.8	11.1	31.1
C14 EO = 6	14.4	4.2	21.6	1.8	14.1
C14 EO = 9	7.4	5.0	11.2	0.0	7.9
C14 EO = 15	0.0	0.0	0.0	0.0	0.0
C15 EO = 0	38.2	9.9	34.7	16.4	21.6
C15 EO = 1	0.0	0.0	0.0	0.0	0.0
C15 EO = 2	0.0	0.0	27.0	36.7	0.0
C15 EO = 6	0.0	0.0	0.0	0.0	0.0
C15 EO = 9	0.0	0.0	0.0	0.0	0.0
C15 EO = 15	0.0	0.0	0.0	0.0	0.0
C18 EO = 0	57.9	57.2	85.7	245.9	40.7
C18 EO = 1	0.0	0.0	0.0	0.0	0.5
C18 EO = 2	0.0	0.0	0.0	0.0	2.9
C18 EO = 6	0.0	0.0	3.6	0.0	2.6
C18 EO = 9	0.0	0.0	5.3	0.0	2.9
C18 EO = 15	0.0	0.0	0.0	0.0	0.0
C18 EO = 0	243.4	68.3	254.6	209.9	141.0
C18 EO = 1	0.0	0.0	0.6	0.0	0.5
C18 EO = 2	0.0	3.7	4.0	5.7	8.0
C18 EO = 6	0.0	0.7	1.8	0.0	1.2
C18 EO = 9	0.0	0.0	12.2	0.0	6.7
C18 EO = 15	0.0	0.0	43.2	0.0	0.0
TOTAL AE (OF ABOVE)	732	570	986	1237	706

Note: "0.0" = non-detected.

Table 3. AE Method Blank and Aqueous Sample Results (Continued)

SITE	WILMINGTON, OH - FAR DOWNSTREAM	BRYAN, OH - UPSTREAM (SIDE STREAM COMPOSITE)	BRYAN, OH - UPSTREAM	BRYAN, OH - RAW INFLUENT	BRYAN, OH - EFFLUENT
FIELD ID	FINAL PORE WATER - F	SURF WATER - U	FINAL PORE WATER - U	STP INFLUENT - R	STP EFFLUENT - E
MATRIX	WATER	WATER	WATER	WATER	WATER
ANALYSIS SEQUENCE	10	5	4	23	14
FILE NAME	3K13Q010	3K14Q005	3K14Q004	3K13Q023	3K14Q014
LAB ID	AE-8-W Wilmington Pore Water-F	AE-23-W Bryon Surf Water-U	AE-22-W Bryon Pore Water-U	AE-20-W Bryon Surf Water-INF 2	AE-31-W Bryon Surf Water-EFF
SAMPLE VOLUME (L)	4.1	4.2	3.8	1	4.3
Sample concentration (ng/L)					
C12 EO = 0	125.2	33.6	184.5	213118	50.7
C12 EO = 1	22.5	34.4	25.9	4371	62.3
C12 EO = 2	48.9	110.3	44.1	6115	137.4
C12 EO = 3	63.8	90.3	61.1	5603	99.8
C12 EO = 6	31.4	15.2	18.9	8869	46.7
C12 EO = 9	11.2	88.2	5.4	11383	14.8
C12 EO = 12	5.7	21.8	0.0	10211	0.0
C12 EO = 15	0.0	72.8	0.0	5791	0.0
C13 EO = 0	38.5	8.9	33.1	154196	22.3
C13 EO = 1	0.0	0.0	0.0	2862	0.0
C13 EO = 2 (< INTERFERENCE)	63.9	75.0	89.7	3681	91.7
C13 EO = 6	0.0	0.0	0.0	3300	0.0
C13 EO = 9	0.0	0.0	0.0	7487	0.0
C13 EO = 15	0.0	0.0	0.0	3071	0.0
C14 EO = 0	35.9	14.0	21.0	143429	13.0
C14 EO = 1	4.1	10.5	9.7	3873	19.8
C14 EO = 2	10.6	20.9	4.0	3512	24.4
C14 EO = 6	10.5	17.2	2.2	7194	9.1
C14 EO = 9	8.6	88.2	1.9	9045	0.0
C14 EO = 15	0.0	60.8	4.4	4390	0.0
C15 EO = 0	12.8	10.3	13.7	119890	13.1
C15 EO = 1	0.0	0.0	0.0	1234	0.0
C15 EO = 2	4.1	0.0	0.0	1771	0.0
C15 EO = 6	6.0	0.0	0.0	1603	0.0
C15 EO = 9	0.0	0.0	0.0	1451	0.0
C15 EO = 15	0.0	0.0	0.0	989	0.0
C16 EO = 0	195.7	49.4	89.5	322611	24.0
C16 EO = 1	0.0	0.0	0.0	142	0.0
C16 EO = 2	0.0	0.0	0.0	395	0.0
C16 EO = 6	4.0	0.0	0.0	1291	0.0
C16 EO = 9	6.0	0.0	1.6	1702	0.0
C16 EO = 15	9.0	0.0	7.7	1193	0.0
C18 EO = 0	187.1	128.1	136.9	361683	73.5
C18 EO = 1	0.0	0.6	0.0	96	0.0
C18 EO = 2	0.0	0.0	0.0	276	0.0
C18 EO = 6	6.1	0.0	0.0	822	0.0
C18 EO = 9	18.7	0.0	2.5	1047	0.0
C18 EO = 15	28.0	0.0	9.2	1045	0.0
TOTAL AE (OF ABOVE)	**958**	**948**	**747**	**1430724**	**703**

Note: "0.0" = non-detected.

Table 3. AE Method Blank and Aqueous Sample Results (Continued)

SITE	BRYAN, OH - END OF MIXING	BRYAN, OH - END OF MIXING	BRYAN, OH - DOWNSTREAM	BRYAN, OH - DOWNSTREAM	BRYAN, OH - FAR DOWNSTREAM	BRYAN, OH - FAR DOWNSTREAM
FIELD ID	SURF WATER - M	FINAL PORE WATER - M	SURF. WATER - D	FINAL PORE WATER - D	SURF. WATER - F	FINAL PORE WATER - F
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER
ANALYSIS SEQUENCE	9	12	20	11	17	18
FILE NAME	3K14Q009	3K13Q012	3K13Q020	3K14Q011	3K14Q017	3K14Q018
LAB ID	AE-27-W Bryon Surf Water-M	AE-10-W Bryon Pore Water-M 2A	AE-17-W Bryon Surf Water-D 2A	AE-29-W Bryon Pore Water-D	AE-34-W Bryon Surf Water-F	AE-35-W Bryon Pore Water-F
SAMPLE VOLUME (L)	4.3	4.3	4.2	4.3	4.2	3.8
Sample concentration (ng/L)						
C12 EO = 0	33.4	1753.4	34.0	225.8	37.4	97.0
C12 EO = 1	39.0	22.5	37.4	34.2	34.2	15.7
C12 EO = 2	87.3	59.1	74.9	278.4	90.3	23.8
C12 EO = 3	90.6	52.5	73.6	91.5	72.4	16.2
C12 EO = 6	23.1	29.0	16.0	55.1	18.4	5.9
C12 EO = 9	111.5	4.6	91.2	7.5	29.6	0.0
C12 EO = 12	39.7	2.6	35.1	3.1	83.4	0.0
C12 EO = 15	95.5	4.5	86.6	0.0	0.0	0.0
C13 EO = 0	6.0	22.1	5.2	23.5	8.5	14.1
C13 EO = 1	0.0	0.0	0.0	0.0	0.0	0.0
C13 EO = 2 (< INTERFERENCE)	81.1	69.5	64.5	101.2	81.9	93.5
C13 EO = 6	0.0	0.0	0.0	0.0	0.0	0.0
C13 EO = 9	172.8	0.0	0.0	0.0	0.0	0.0
C13 EO = 15	79.8	0.0	0.0	0.0	0.0	0.0
C14 EO = 0	10.0	71.8	7.6	46.0	18.0	16.0
C14 EO = 1	9.6	0.0	10.1	0.0	7.3	3.8
C14 EO = 2	18.2	0.0	20.9	84.2	164.6	0.0
C14 EO = 6	33.2	0.0	19.5	0.0	5.7	1.7
C14 EO = 9	107.3	0.0	82.6	0.0	0.0	0.0
C14 EO = 15	98.7	0.0	87.3	0.0	0.0	0.0
C15 EO = 0	6.0	18.3	4.8	32.2	14.5	7.0
C15 EO = 1	6.7	0.0	0.0	0.0	3.9	0.0
C15 EO = 2	0.0	9.2	0.0	0.0	0.0	0.0
C15 EO = 6	0.0	0.0	0.0	0.0	0.0	0.0
C15 EO = 9	0.0	0.0	0.0	0.0	0.0	0.0
C15 EO = 15	0.0	0.0	0.0	0.0	0.0	0.0
C16 EO = 0	27.5	577.7	25.6	42.6	15.7	25.2
C16 EO = 1	0.3	0.0	0.8	0.0	0.0	0.4
C16 EO = 2	0.0	0.0	1.0	22.2	0.0	0.0
C16 EO = 6	0.0	0.0	2.8	0.0	0.0	0.0
C16 EO = 9	0.0	2.0	18.6	0.0	0.0	0.0
C16 EO = 15	0.0	5.2	47.9	0.0	0.0	4.8
C18 EO = 0	108.3	342.1	102.9	79.2	70.1	57.1
C18 EO = 1	0.4	0.0	0.9	0.0	0.0	0.0
C18 EO = 2	0.0	0.0	1.8	26.8	0.0	0.0
C18 EO = 6	0.0	1.1	9.7	2.1	0.0	0.8
C18 EO = 9	0.0	3.8	19.8	0.0	0.0	3.6
C18 EO = 15	0.0	10.6	71.4	0.0	0.0	9.4
TOTAL AE (OF ABOVE)	1286	3062	1055	1156	754	396

Note: "0.0" = non-detected.

Table 4. AE Spiked Control Water Results

	WILMINGTON LAB CONTROL SPIKE			BRYAN LAB CONTROL SPIKE		
Sequence number	3			4		
File name	3K13Q003			3K13Q004		
Sample description	AE-1-W Wilmington QC-LCS 2A			AE-2-W Bryon QC-LCS 2A		
Sample volume (L)	4.0	THEORY (ng/L)	% RECOVERY	4.0	THEORY (ng/L)	% RECOVERY
	Sample concentration (ng/L)			Sample concentration (ng/L)		
C12 EO = 0	56	130	**44**	69	130	**53**
C12 EO = 1	8	12	**63**	7	12	**60**
C12 EO = 2	16	19	**84**	11	19	**59**
C12 EO = 3	22	28	**78**	17	28	**60**
C12 EO = 6	56	59	**95**	52	59	**88**
C12 EO = 9	62	84	**74**	60	84	**72**
C12 EO = 12	64	83	**78**	55	83	**67**
C12 EO = 15	43	54	**79**	38	54	**70**
C13 EO = 0	36	145	**25**	56	145	**39**
C13 EO = 1	INT	13	**NA**	INT	13	**NA**
C13 EO = 2 (INT)	1	20	**4**	6	20	**30**
C13 EO = 6	37	61	**61**	38	61	**63**
C13 EO = 9	76	87	**88**	74	87	**86**
C13 EO = 15	35	56	**62**	32	56	**57**
C14 EO = 0	14	124	**11**	29	124	**23**
C14 EO = 1	3	11	**27**	3	11	**32**
C14 EO = 2	4	16	**27**	6	16	**36**
C14 EO = 6	21	50	**42**	21	50	**41**
C14 EO = 9	33	72	**45**	30	72	**42**
C14 EO = 15	29	46	**63**	20	46	**43**
C15 EO = 0	8	123	**7**	19	123	**16**
C15 EO = 1	2	9	**21**	3	9	**33**
C15 EO = 2	2	14	**12**	5	14	**38**
C15 EO = 6	11	42	**27**	14	42	**34**
C15 EO = 9	18	60	**31**	18	60	**30**
C15 EO = 15	15	39	**38**	12	39	**32**
C16 EO = 0	11	133	**8**	20	133	**15**
C16 EO = 1	0.3	1.3	**23**	0	1	**29**
C16 EO = 2	0.8	3.7	**23**	2	4	**58**
C16 EO = 6	5	21	**25**	8	21	**39**
C16 EO = 9	15	45	**34**	20	45	**45**
C16 EO = 15	19	52	**37**	22	52	**42**
C18 EO = 0	40	152	**26**	37	152	**24**
C18 EO = 1	0.7	3.1	**22**	0.7	3.1	**21**
C18 EO = 2	1.9	9.0	**21**	1.9	9.0	**22**
C18 EO = 6	13	50	**26**	15	50	**30**
C18 EO = 9	33	105	**31**	33	105	**32**
C18 EO = 15	51	121	**42**	61	121	**50**
TOTAL AE (OF ABOVE)	864	2153	**40**	919	2153	**43**

Note: LCS Recoveries corrected for respective method blank of sample batch.

Table 4. AE Spiked Control Water Results (Continued)

	LOWELL LAB CONTROL SPIKE			AVERAGE % RECOVERY (ALL LCS)	PRECISION (% RSD) (ALL LCS)
Sequence number	16				
File name	3K14Q016				
Sample description	AE-33-W Lowell QC-LCS				
Sample volume (L)	4.0	THEORY (ng/L)	% RECOVERY		
	Sample concentration (ng/L)				
C12 EO = 0	120	259	46	48	5
C12 EO = 1	15	25	61	61	2
C12 EO = 2	23	39	59	67	14
C12 EO = 3	63	56	113	84	27
C12 EO = 6	117	118	100	94	6
C12 EO = 9	188	167	112	86	23
C12 EO = 12	144	165	87	77	10
C12 EO = 15	99	108	92	80	11
C13 EO = 0	109	289	38	34	8
C13 EO = 1	31	26	120	120	NA
C13 EO = 2 (INT)	21	40	52	28	24
C13 EO = 6	103	122	84	69	13
C13 EO = 9	212	173	122	99	20
C13 EO = 15	84	112	75	65	9
C14 EO = 0	38	249	15	17	6
C14 EO = 1	9	21	42	34	7
C14 EO = 2	10	33	31	32	5
C14 EO = 6	57	101	57	47	9
C14 EO = 9	84	144	59	49	9
C14 EO = 15	68	93	73	60	16
C15 EO = 0	28	246	11	11	5
C15 EO = 1	4	18	20	25	7
C15 EO = 2	8	27	28	26	13
C15 EO = 6	33	84	40	34	6
C15 EO = 9	53	120	45	35	8
C15 EO = 15	43	77	56	42	13
C16 EO = 0	22	266	8	11	4
C16 EO = 1	1	3	27	27	3
C16 EO = 2	1	7	18	33	22
C16 EO = 6	11	43	26	30	8
C16 EO = 9	36	89	40	40	5
C16 EO = 15	40	103	39	40	3
C18 EO = 0	42	305	14	22	7
C18 EO = 1	1	6	23	22	1
C18 EO = 2	4	18	20	21	1
C18 EO = 6	17	101	17	24	6
C18 EO = 9	42	210	20	28	7
C18 EO = 15	73	243	30	41	10
TOTAL AE (OF ABOVE)	2053	4305	48	43	4

Note: LCS Recoveries corrected for respective method blank of sample batch.

Table 5. AE Sediments and Method Blanks

SITE SAMPLE CODE MATRIX	REPORTING LIMIT SEDIMENTS	LOWELL LAB METHOD BLANK REAGENTS ONLY	WILMINGTON LAB METHOD BLANK REAGENTS ONLY	BRYAN LAB METHOD BLANK REAGENTS ONLY	Average Method blank (ng/g)	Precision (1 Std. Dev.) (ng/g)
Sequence number: File name: Lab ID: Sample weight (g, dry weight)		6.0 3K19Q006 AE-S-43 Lowell QC-MB 20.0	17.0 3K18Q017 AE-S-30 Wilmington QC-MB 20.0	25.0 3K18Q025 AE-S-37 Bryon QC-MB 20.0		
Concentration (ng/g, dry weight)						
C12 EO = 0	5.2	1.0	2.7	3.3	2.4	1.2
C12 EO = 1	0.5	0.1	1.6	3.0	1.5	1.4
C12 EO = 2	0.8	0.0	4.8	4.5	3.1	2.7
C12 EO = 3	1.1	0.0	3.1	5.5	2.9	2.8
C12 EO = 6	2.4	0.0	2.5	2.5	1.7	1.4
C12 EO = 9	3.3	0.0	2.7	2.8	1.9	1.6
C12 EO = 12	3.3	0.0	1.1	2.1	1.1	1.1
C12 EO = 15	2.2	0.0	0.0	0.0	0.0	0.0
C13 EO = 0	5.8	1.1	2.0	3.8	2.3	1.4
C13 EO = 1	0.5	1.8	0.9	7.5	3.4	3.6
C13 EO = 2 (INTERFERENCE)	0.8	14.9	17.7	16.5	16.4	1.4
C13 EO = 6	2.4	0.0	1.2	0.0	0.4	0.7
C13 EO = 9	3.5	0.0	2.3	2.4	1.6	1.3
C13 EO = 15	2.2	0.0	0.0	0.0	0.0	0.0
C14 EO = 0	5.0	0.5	3.2	4.2	2.6	1.9
C14 EO = 1	0.4	0.0	1.4	0.0	0.5	0.8
C14 EO = 2	0.7	0.0	0.0	0.0	0.0	0.0
C14 EO = 6	2.0	0.0	1.8	2.2	1.3	1.2
C14 EO = 9	2.9	0.0	3.1	3.4	2.2	1.9
C14 EO = 15	1.9	0.0	0.0	0.0	0.0	0.0
C15 EO = 0	4.9	1.2	15.3	10.8	9.1	7.2
C15 EO = 1	0.4	0.0	0.9	0.0	0.3	0.5
C15 EO = 2	0.5	0.0	1.4	4.7	2.0	2.4
C15 EO = 6	1.7	0.0	0.7	0.0	0.2	0.4
C15 EO = 9	2.4	0.0	0.8	0.0	0.3	0.5
C15 EO = 15	1.5	0.0	0.4	0.0	0.1	0.2
C16 EO = 0	5.3	0.7	18.1	36.1	18.3	17.7
C16 EO = 1	0.1	0.0	0.0	0.0	0.0	0.0
C16 EO = 2	0.1	0.0	0.0	0.0	0.0	0.0
C16 EO = 6	0.9	0.0	0.0	0.0	0.0	0.0
C16 EO = 9	1.8	0.0	0.0	0.0	0.0	0.0
C16 EO = 15	2.1	0.0	0.0	0.0	0.0	0.0
C18 EO = 0	6.1	3.1	11.1	41.1	18.4	20.0
C18 EO = 1	0.1	0.0	0.0	0.0	0.0	0.0
C18 EO = 2	0.4	0.0	0.0	0.0	0.0	0.0
C18 EO = 6	2.0	0.0	0.0	0.0	0.0	0.0
C18 EO = 9	4.2	0.0	0.0	0.0	0.0	0.0
C18 EO = 15	4.9	0.0	0.0	0.0	0.0	0.0
TOTAL AE (OF ABOVE)	86	24	101	156	84	66
PRECISION (as percent) =						71%

Note: "0.0" = not detected.

Table 5. AE Sediments and Method Blanks (Continued)

SITE	LOWELL, IN - UPSTREAM	LAB DUPLICATE LOWELL, IN - UPSTREAM		
SAMPLE CODE	CENTRIFUGED SEDIMENT - U	CENTRIFUGED SEDIMENT - U		
MATRIX	SEDIMENT	SEDIMENT		
Sequence number:	9	5		
File name:	3K17Q009	3K18Q005		
Lab ID:	AE-S-7 Lowell Cent Sed-U	AE-S-19 LOWELL CENT SED-U (DUP)		
Sample weight (g, dry weight)	16.65	16.65	Average (ng/g)	Precision (Range, +/-) (ng/g)
Concentration (ng/g, dry weight)				
C12 EO = 0	3.2	3.1	3.1	0.0
C12 EO = 1	1.5	2.8	2.2	0.6
C12 EO = 2	2.9	7.1	5.0	2.1
C12 EO = 3	2.9	8.7	5.8	2.9
C12 EO = 6	3.1	2.7	2.9	0.2
C12 EO = 9	4.7	2.8	3.7	0.9
C12 EO = 12	2.4	1.5	2.0	0.5
C12 EO = 15	0.0	0.0	0.0	0.0
C13 EO = 0	3.9	3.9	3.9	0.0
C13 EO = 1	0.0	10.4	5.2	5.2
C13 EO = 2 (INTERFERENCE)	0.0	19.8	9.9	9.9
C13 EO = 6	2.8	2.4	2.6	0.2
C13 EO = 9	5.9	4.2	5.0	0.9
C13 EO = 15	0.0	0.0	0.0	0.0
C14 EO = 0	3.7	4.3	4.0	0.3
C14 EO = 1	2.0	4.0	3.0	1.0
C14 EO = 2	2.5	3.6	3.0	0.6
C14 EO = 6	4.6	9.0	6.8	2.2
C14 EO = 9	11.0	9.7	10.4	0.7
C14 EO = 15	0.0	0.0	0.0	0.0
C15 EO = 0	6.0	14.0	10.0	4.0
C15 EO = 1	1.9	1.9	1.9	0.0
C15 EO = 2	2.5	3.1	2.8	0.3
C15 EO = 6	2.0	2.0	2.0	0.0
C15 EO = 9	2.0	0.0	1.0	1.0
C15 EO = 15	0.0	0.0	0.0	0.0
C16 EO = 0	7.1	9.8	8.5	1.4
C16 EO = 1	0.0	0.0	0.0	0.0
C16 EO = 2	1.0	0.0	0.5	0.5
C16 EO = 6	0.8	0.0	0.4	0.4
C16 EO = 9	1.3	0.0	0.6	0.6
C16 EO = 15	1.0	0.0	0.5	0.5
C18 EO = 0	5.6	10.1	7.9	2.2
C18 EO = 1	0.1	0.0	0.1	0.1
C18 EO = 2	0.0	0.0	0.0	0.0
C18 EO = 6	0.0	0.0	0.0	0.0
C18 EO = 9	1.1	0.0	0.6	0.6
C18 EO = 15	1.9	0.0	1.0	1.0
TOTAL AE (OF ABOVE)	**92**	**141**	**116**	**25**
PRECISION (as percent) =				**21%**

Note: "0.0" = not detected.

Table 5. AE Sediments and Method Blanks (Continued)

SITE	LOWELL, IN - UPSTREAM	LAB DUPLICATE LOWELL, IN - UPSTREAM		
SAMPLE CODE	CENTRIFUGED SEDIMENT FINES - U	CENTRIFUGED SEDIMENT FINES - U		
MATRIX	SEDIMENT	SEDIMENT		
Sequence number:	20	22		
File name:	3K18Q020	3K18Q022		
Lab ID:	AE-S-33 Lowell Sed Fine-U	AE-S-35 Lowell Sed Fine-U(Dup)		
Sample weight (g, dry weight)	9.01	8.62	Average (ng/g)	Precision (Range, +/-) (ng/g)
Concentration (ng/g, dry weight)				
C12 EO = 0	37	29	33.0	3.8
C12 EO = 1	6	7	6.8	0.1
C12 EO = 2	8	9	8.5	0.4
C12 EO = 3	12	10	11.4	1.0
C12 EO = 6	23	17	20.0	3.3
C12 EO = 9	48	19	33.9	14.5
C12 EO = 12	30	13	21.6	8.1
C12 EO = 15	21	2	11.2	9.4
C13 EO = 0	50	43	46.4	3.5
C13 EO = 1	9	20	14.6	5.2
C13 EO = 2 (INTERFERENCE)	37	45	40.7	3.9
C13 EO = 6	24	17	20.6	3.6
C13 EO = 9	50	35	42.9	7.5
C13 EO = 15	20	3	11.7	8.7
C14 EO = 0	40	36	37.9	2.1
C14 EO = 1	5	8	6.5	1.6
C14 EO = 2	6	10	7.6	2.0
C14 EO = 6	19	29	24.1	5.1
C14 EO = 9	29	36	32.3	3.3
C14 EO = 15	20	4	11.7	8.1
C15 EO = 0	39	46	42.8	3.5
C15 EO = 1	4	4	3.8	0.1
C15 EO = 2	7	7	7.2	0.3
C15 EO = 6	18	18	17.8	0.1
C15 EO = 9	24	24	23.7	0.2
C15 EO = 15	20	0	10.2	10.2
C16 EO = 0	47	49	48.2	1.1
C16 EO = 1	1	1	0.8	0.2
C16 EO = 2	1	1	1.2	0.2
C16 EO = 6	10	0	4.8	4.8
C16 EO = 9	20	0	10.2	10.2
C16 EO = 15	22	2	12.0	9.7
C18 EO = 0	64	57	60.8	3.8
C18 EO = 1	2	1	1.3	0.4
C18 EO = 2	4	2	3.1	0.7
C18 EO = 6	20	10	15.0	5.3
C18 EO = 9	43	24	33.7	9.4
C16 EO = 15	61	15	37.9	22.8
TOTAL AE (OF ABOVE)	902	652	777	125
PRECISION (as percent) =				16%

Note: "0.0" = not detected.

Table 5. AE Sediments and Method Blanks (Continued)

SITE	LOWELL, IN - DISCHARGE CENTRIFUGED SEDIMENT - D SEDIMENT	LAB DUPLICATE LOWELL, IN - DISCHARGE CENTRIFUGED SEDIMENT - D SEDIMENT			LOWELL, IN - DISCHARGE CENTRIFUGED SEDIMENT FINES - D SEDIMENT	
SAMPLE CODE						
MATRIX						
Sequence number:	17	7			8	
File name:	3K17Q017	3K18Q007			3K19Q008	
Lab ID:	AE-S-14 Lowell Cent Sed-D	AE-S-21 Lowell CENT SED-D(Dup)			AE-S-45 Lowell Sed Fine-D	
Sample weight (g, dry weight)	17.14	16.89	Average (ng/g)	Precision (Range, +/-) (ng/g)	5.64	
Concentration (ng/g, dry weight)						
C12 EO = 0	8.9	3.4	6.1	2.8		99
C12 EO = 1	0.6	0.6	0.6	0.0		24
C12 EO = 2	2.2	0.0	1.1	1.1		19
C12 EO = 3	0.0	0.0	0.0	0.0		17
C12 EO = 6	0.0	0.0	0.0	0.0		13
C12 EO = 9	0.5	0.3	0.4	0.1		10
C12 EO = 12	1.5	0.5	1.0	0.5		4
C12 EO = 15	0.0	0.0	0.0	0.0		0
C13 EO = 0	14.8	2.3	8.6	6.2		28
C13 EO = 1	0.0	2.0	1.0	1.0		6
C13 EO = 2 (INTERFERENCE)	0.0	13.5	6.8	6.9		58
C13 EO = 6	0.0	0.0	0.0	0.0		3
C13 EO = 9	0.0	0.0	0.0	0.0		9
C13 EO = 15	0.0	0.0	0.0	0.0		0
C14 EO = 0	5.3	2.3	3.8	1.5		141
C14 EO = 1	0.0	0.0	0.0	0.0		41
C14 EO = 2	0.0	0.0	0.0	0.0		27
C14 EO = 6	0.0	1.2	0.6	0.6		21
C14 EO = 9	0.0	3.0	1.5	1.5		32
C14 EO = 15	0.0	0.0	0.0	0.0		5
C15 EO = 0	9.0	6.5	7.8	1.3		191
C15 EO = 1	0.0	0.0	0.0	0.0		11
C15 EO = 2	0.0	0.0	0.0	0.0		31
C15 EO = 6	0.0	0.0	0.0	0.0		4
C15 EO = 9	0.0	0.0	0.0	0.0		0
C15 EO = 15	0.0	0.0	0.0	0.0		0
C16 EO = 0	3.1	6.0	4.6	1.4		535
C16 EO = 1	0.0	0.0	0.0	0.0		0
C16 EO = 2	0.0	0.0	0.0	0.0		0
C16 EO = 6	0.0	0.0	0.0	0.0		0
C16 EO = 9	0.0	0.7	0.3	0.3		0
C16 EO = 15	0.0	2.1	1.0	1.0		0
C18 EO = 0	5.3	8.1	6.7	1.4		200
C18 EO = 1	0.0	0.0	0.0	0.0		0
C18 EO = 2	0.0	0.0	0.0	0.0		0
C18 EO = 6	0.0	0.3	0.2	0.2		2
C18 EO = 9	1.0	1.4	1.2	0.2		5
C18 EO = 15	4.0	7.8	5.9	1.9		14
TOTAL AE (OF ABOVE)	56	62	59.2	2.9		1549
PRECISION (as percent) =				5%		

Note: "0.0" = not detected.

Table 5. AE Sediments and Method Blanks (Continued)

SITE	LOWELL, IN - END OF MIXING	LAB DUPLICATE LOWELL, IN - END OF MIXING		
SAMPLE CODE	CENTRIFUGED SEDIMENT - M	CENTRIFUGED SEDIMENT - M		
MATRIX	SEDIMENT	SEDIMENT		
Sequence number:	16	12		
File name:	3K17Q016	3K17Q012		
Lab ID:	AE-S-13 Lowell Cent Sed-M	AE-S-9 Lowell Cent Sed-M(Dup)		
Sample weight (g, dry weight)	13.99	13.31	Average (ng/g)	Precision (Range, +/-) (ng/g)
Concentration (ng/g, dry weight)				
C12 EO = 0	7.9	13.6	10.7	2.8
C12 EO = 1	2.8	4.6	3.7	0.9
C12 EO = 2	0.0	1.8	0.9	0.9
C12 EO = 3	0.0	4.2	2.1	2.1
C12 EO = 6	2.1	6.0	4.1	2.0
C12 EO = 9	1.1	1.0	1.1	0.1
C12 EO = 12	0.0	0.0	0.0	0.0
C12 EO = 15	0.0	0.0	0.0	0.0
C13 EO = 0	6.3	10.1	8.2	1.9
C13 EO = 1	0.0	0.0	0.0	0.0
C13 EO = 2 (INTERFERENCE)	0.0	0.0	0.0	0.0
C13 EO = 6	0.0	0.0	0.0	0.0
C13 EO = 9	0.0	0.0	0.0	0.0
C13 EO = 15	0.0	0.0	0.0	0.0
C14 EO = 0	7.7	14.7	11.2	3.5
C14 EO = 1	9.1	70.6	39.9	30.7
C14 EO = 2	0.0	0.0	0.0	0.0
C14 EO = 6	0.0	0.0	0.0	0.0
C14 EO = 9	1.5	0.0	0.8	0.8
C14 EO = 15	0.0	0.0	0.0	0.0
C15 EO = 0	11.9	19.8	15.8	3.9
C15 EO = 1	0.0	0.0	0.0	0.0
C15 EO = 2	0.0	0.0	0.0	0.0
C15 EO = 6	0.0	0.0	0.0	0.0
C15 EO = 9	0.0	0.0	0.0	0.0
C15 EO = 15	0.0	0.0	0.0	0.0
C16 EO = 0	25.2	38.3	31.7	6.6
C16 EO = 1	0.0	0.7	0.3	0.3
C16 EO = 2	0.0	0.0	0.0	0.0
C16 EO = 6	0.0	0.0	0.0	0.0
C16 EO = 9	0.0	0.0	0.0	0.0
C16 EO = 15	0.0	0.0	0.0	0.0
C18 EO = 0	15.7	25.3	20.5	4.8
C18 EO = 1	0.0	0.0	0.0	0.0
C18 EO = 2	0.0	0.0	0.0	0.0
C18 EO = 6	0.0	0.0	0.0	0.0
C18 EO = 9	0.9	0.0	0.4	0.4
C18 EO = 15	4.0	0.0	2.0	2.0
TOTAL AE (OF ABOVE)	96	211	153	57
PRECISION (as percent) =				37%

Note: "0.0" = not detected.

Table 5. AE Sediments and Method Blanks (Continued)

SITE	LOWELL, IN - END OF MIXING	LAB DUPLICATE LOWELL, IN - END OF MIXING			
SAMPLE CODE	CENTRIFUGED SEDIMENT FINES - M	CENTRIFUGED SEDIMENT FINES - M			
MATRIX	SEDIMENT	SEDIMENT			
Sequence number:	8	4			
File name:	3K17Q008	3K17Q004			
Lab ID:	AE-S-6 Lowell Sed Fine-M	AE-S-2 Lowell Sed Fine-M(Dup)			
Sample weight (g, dry weight)	8.32	8.95		Average (ng/g)	Precision (Range, +/-) (ng/g)
Concentration (ng/g, dry weight)					
C12 EO = 0	54.6	42.6		48.6	6.0
C12 EO = 1	23.5	14.9		19.2	4.3
C12 EO = 2	7.5	9.4		8.4	0.9
C12 EO = 3	12.6	11.0		11.8	0.8
C12 EO = 6	7.7	9.1		8.4	0.7
C12 EO = 9	7.3	8.0		7.6	0.3
C12 EO = 12	2.7	3.1		2.9	0.2
C12 EO = 15	0.0	5.4		2.7	2.7
C13 EO = 0	28.4	27.4		27.9	0.5
C13 EO = 1	0.0	3.1		1.6	1.6
C13 EO = 2 (INTERFERENCE)	0.0	0.0		0.0	0.0
C13 EO = 6	0.0	0.0		0.0	0.0
C13 EO = 9	0.0	0.0		0.0	0.0
C13 EO = 15	0.0	0.0		0.0	0.0
C14 EO = 0	53.9	44.2		49.0	4.9
C14 EO = 1	15.0	17.3		16.1	1.2
C14 EO = 2	0.0	0.0		0.0	0.0
C14 EO = 6	9.0	4.9		7.0	2.0
C14 EO = 9	6.2	6.5		6.4	0.1
C14 EO = 15	0.0	0.0		0.0	0.0
C15 EO = 0	55.1	26.3		40.7	14.4
C15 EO = 1	0.0	0.0		0.0	0.0
C15 EO = 2	19.6	0.0		9.8	9.8
C15 EO = 6	0.0	0.0		0.0	0.0
C15 EO = 9	0.0	0.0		0.0	0.0
C15 EO = 15	0.0	0.0		0.0	0.0
C16 EO = 0	103.5	62.5		83.0	20.5
C16 EO = 1	0.0	0.0		0.0	0.0
C16 EO = 2	0.0	0.0		0.0	0.0
C16 EO = 6	0.0	0.0		0.0	0.0
C16 EO = 9	0.0	0.0		0.0	0.0
C16 EO = 15	0.0	0.0		0.0	0.0
C18 EO = 0	89.1	61.1		75.1	14.0
C18 EO = 1	0.4	0.0		0.2	0.2
C18 EO = 2	0.0	0.0		0.0	0.0
C18 EO = 6	0.0	0.0		0.0	0.0
C18 EO = 9	0.0	0.0		0.0	0.0
C18 EO = 15	12.3	0.0		6.2	6.2
TOTAL AE (OF ABOVE)	509	357		433	76
PRECISION (as percent) =					18%

Note: "0.0" = not detected.

Table 5. AE Sediments and Method Blanks (Continued)

SITE	LOWELL, IN - FAR DOWNSTREAM	LAB DUPLICATE LOWELL, IN - FAR DOWNSTREAM		
SAMPLE CODE	CENTRIFUGED SEDIMENT - F	CENTRIFUGED SEDIMENT - F		
MATRIX	SEDIMENT	SEDIMENT		
Sequence number:	4	18		
File name:	3K18Q004	3K17Q018		
Lab ID:	AE-S-18 Lowell Cent Sed F	AE-S-15 Lowell Cent Sed-F-(DUPLICATE)		
Sample weight (g, dry weight)	15.86	15.82	Average (ng/g)	Precision (Range, +/-) (ng/g)
Concentration (ng/g, dry weight)				
C12 EO = 0	4.2	21.6	12.9	8.7
C12 EO = 1	0.9	6.5	3.7	2.8
C12 EO = 2	2.0	2.9	2.4	0.4
C12 EO = 3	3.2	6.2	4.7	1.5
C12 EO = 6	2.0	1.4	1.7	0.3
C12 EO = 9	2.2	2.8	2.5	0.3
C12 EO = 12	3.7	2.6	3.2	0.5
C12 EO = 15	0.7	0.0	0.4	0.4
C13 EO = 0	3.6	17.4	10.5	6.9
C13 EO = 1	0.7	0.0	0.4	0.4
C13 EO = 2 (INTERFERENCE)	17.4	0.0	8.7	8.7
C13 EO = 6	1.5	0.0	0.7	0.7
C13 EO = 9	2.8	3.1	2.9	0.2
C13 EO = 15	0.0	0.0	0.0	0.0
C14 EO = 0	5.2	50.0	27.6	22.4
C14 EO = 1	1.6	8.5	5.1	3.5
C14 EO = 2	0.0	4.2	2.1	2.1
C14 EO = 6	1.8	0.0	0.9	0.9
C14 EO = 9	4.9	5.0	4.9	0.0
C14 EO = 15	0.0	1.0	0.5	0.5
C15 EO = 0	17.8	126.9	72.4	54.5
C15 EO = 1	0.0	0.0	0.0	0.0
C15 EO = 2	0.0	93.8	48.9	48.9
C15 EO = 6	0.0	0.8	0.4	0.4
C15 EO = 9	0.0	1.1	0.6	0.6
C15 EO = 15	0.0	0.7	0.3	0.3
C16 EO = 0	16.4	207.0	111.7	95.3
C16 EO = 1	0.0	0.1	0.1	0.1
C16 EO = 2	0.0	0.0	0.0	0.0
C16 EO = 6	0.0	0.0	0.0	0.0
C16 EO = 9	1.4	0.0	0.7	0.7
C16 EO = 15	0.0	0.0	0.0	0.0
C18 EO = 0	11.9	77.6	44.8	32.9
C18 EO = 1	0.0	0.2	0.1	0.1
C18 EO = 2	0.0	0.0	0.0	0.0
C18 EO = 6	0.0	0.9	0.4	0.4
C18 EO = 9	1.0	0.4	0.7	0.3
C18 EO = 15	0.0	1.7	0.8	0.8
TOTAL AE (OF ABOVE)	107	644	376	269
PRECISION (as percent) =				72%

Note: "0.0" = not detected.

Table 5. AE Sediments and Method Blanks (Continued)

SITE	LOWELL, IN - FAR DOWNSTREAM	LAB DUPLICATE LOWELL, IN - FAR DOWNSTREAM			
SAMPLE CODE	CENTRIFUGED SEDIMENT FINES - F	CENTRIFUGED SEDIMENT FINES - F			
MATRIX	SEDIMENT	SEDIMENT			
Sequence number:	28	19			
File name:	3K18Q028	3K17Q019			
Lab ID:	AE-S-40 Lowell Sed Fine-F	AE-S-16 Lowell Sed Fine-F(Dup)			
Sample weight (g, dry weight)	7.50	7.78		Average (ng/g)	Precision (Range, +/-) (ng/g)
Concentration (ng/g, dry weight)					
C12 EO = 0	114	110		111.7	2.1
C12 EO = 1	30	25		27.5	2.6
C12 EO = 2	13	160		86.5	73.4
C12 EO = 3	16.0	23.0		19.5	3.5
C12 EO = 6	8.9	12.5		10.7	1.8
C12 EO = 9	11.0	14.2		12.6	1.6
C12 EO = 12	7.1	10.8		8.9	1.9
C12 EO = 15	4.3	6.2		5.2	0.9
C13 EO = 0	43	101		71.7	29.0
C13 EO = 1	7.9	0.0		4.0	4.0
C13 EO = 2 (INTERFERENCE)	35.4	0.0		17.7	17.7
C13 EO = 6	4.0	0.0		2.0	2.0
C13 EO = 9	6.8	0.0		3.4	3.4
C13 EO = 15	0.0	0.0		0.0	0.0
C14 EO = 0	234	223		228.8	5.4
C14 EO = 1	23.3	50.6		36.8	13.7
C14 EO = 2	10.5	277.3		143.9	133.4
C14 EO = 6	10.4	0.0		5.2	5.2
C14 EO = 9	14.8	0.0		7.4	7.4
C14 EO = 15	2.9	0.0		1.4	1.4
C15 EO = 0	115	454		284.8	169.8
C15 EO = 1	0.0	0.0		0.0	0.0
C15 EO = 2	0.0	0.0		0.0	0.0
C15 EO = 6	0.0	0.0		0.0	0.0
C15 EO = 9	0.0	0.0		0.0	0.0
C15 EO = 15	0.0	0.0		0.0	0.0
C16 EO = 0	2035	511		1273.1	762.1
C16 EO = 1	0.0	0.0		0.0	0.0
C16 EO = 2	0.0	0.0		0.0	0.0
C16 EO = 6	1.8	0.0		0.9	0.9
C16 EO = 9	11.2	0.0		5.6	5.6
C16 EO = 15	3.5	0.0		1.8	1.8
C18 EO = 0	1709	204		956.6	752.6
C18 EO = 1	0.0	0.0		0.0	0.0
C18 EO = 2	0.0	0.0		0.0	0.0
C18 EO = 6	0.0	0.0		0.0	0.0
C18 EO = 9	0.0	0.0		0.0	0.0
C18 EO = 15	0.0	0.0		0.0	0.0
TOTAL AE (OF ABOVE)	4473	2182		3328	1145
PRECISION (as percent) =					34%

Note: "0.0" = not detected.

Table 5. AE Sediments and Method Blanks (Continued)

SITE	WILMINGTON, OH - UPSTREAM	LAB DUPLICATE WILMINGTON, OH - UPSTREAM			
SAMPLE CODE	CENTRIFUGED SEDIMENT - U	CENTRIFUGED SEDIMENT - U			
MATRIX	SEDIMENT	SEDIMENT			
Sequence number:	1	Duplicate Injection 26			
File name:	3K19Q001	3K18Q026			
Lab ID:	AE-S-38 Wilmington Cent Sed-U	AE-S-38 Wilmington Cent Sed-U			
Sample weight (g, dry weight)	17.80	17.80		Average (ng/g)	Precision (Range, +/-) (ng/g)
Concentration (ng/g, dry weight)					
C12 EO = 0	2.8	5.6		4.2	1.4
C12 EO = 1	0.9	2.0		1.4	0.5
C12 EO = 2	0.0	3.0		1.5	1.5
C12 EO = 3	0.0	7.8		3.9	3.9
C12 EO = 6	1.2	2.8		2.0	0.8
C12 EO = 9	2.2	4.2		3.2	1.0
C12 EO = 12	1.3	2.9		2.1	0.8
C12 EO = 15	0.3	1.2		0.8	0.5
C13 EO = 0	3.5	7.0		5.3	1.7
C13 EO = 1	0.7	5.1		2.9	2.2
C13 EO = 2 (INTERFERENCE)	10.3	18.2		14.3	3.9
C13 EO = 6	0.9	1.1		1.0	0.1
C13 EO = 9	1.9	2.7		2.3	0.4
C13 EO = 15	0.0	0.0		0.0	0.0
C14 EO = 0	1.8	6.7		4.2	2.5
C14 EO = 1	1.4	2.8		2.1	0.7
C14 EO = 2	0.0	1.8		0.9	0.9
C14 EO = 6	1.0	2.1		1.6	0.5
C14 EO = 9	2.7	4.0		3.4	0.7
C14 EO = 15	0.0	0.7		0.3	0.3
C15 EO = 0	5.8	16.1		11.0	5.2
C15 EO = 1	0.0	0.0		0.0	0.0
C15 EO = 2	0.0	0.0		0.0	0.0
C15 EO = 6	0.0	0.0		0.0	0.0
C15 EO = 9	0.0	0.9		0.5	0.5
C15 EO = 15	0.0	0.0		0.0	0.0
C16 EO = 0	5.4	49.0		27.2	21.8
C16 EO = 1	0.0	0.0		0.0	0.0
C16 EO = 2	0.0	0.0		0.0	0.0
C16 EO = 6	0.0	0.0		0.0	0.0
C16 EO = 9	0.0	0.0		0.0	0.0
C16 EO = 15	0.0	1.4		0.7	0.7
C18 EO = 0	5.7	54.0		29.9	24.2
C18 EO = 1	0.0	0.0		0.0	0.0
C18 EO = 2	0.0	0.0		0.0	0.0
C18 EO = 6	0.0	0.7		0.3	0.3
C18 EO = 9	0.0	1.8		0.9	0.9
C18 EO = 15	0.0	4.5		2.3	2.3
TOTAL AE (OF ABOVE)	50	210		130	80
PRECISION (as percent) =					62%

Note: "0.0" = not detected.

Table 5. AE Sediments and Method Blanks (Continued)

SITE	WILMINGTON, OH - UPSTREAM	LAB DUPLICATE WILMINGTON, OH - UPSTREAM			
SAMPLE CODE	CENTRIFUGED SEDIMENT FINES - U	CENTRIFUGED SEDIMENT FINES - U			
MATRIX	SEDIMENT	SEDIMENT			
Sequence number:	29	4			
File name:	3K18Q029	3K19Q004			
Lab ID:	AE-S-41 Wwilmington Sed Fine-U	AE-S-41 Wilmington Sed Fine-U			
Sample weight (g, dry weight)	10.10	10.10		Average (ng/g)	Precision (Range, +/-) (ng/g)
Concentration (ng/g, dry weight)					
C12 EO = 0	29.0	35.3		32.1	3.1
C12 EO = 1	10.6	21.5		16.0	5.5
C12 EO = 2	5.2	13.1		9.2	3.9
C12 EO = 3	0.0	27.5		13.7	13.7
C12 EO = 6	3.5	6.8		5.1	1.6
C12 EO = 9	4.6	11.8		8.2	3.6
C12 EO = 12	2.8	3.9		3.3	0.5
C12 EO = 15	2.1	2.1		2.1	0.0
C13 EO = 0	34.2	24.5		29.3	4.9
C13 EO = 1	4.8	3.3		4.1	0.7
C13 EO = 2 (INTERFERENCE)	49.3	24.6		37.0	12.4
C13 EO = 6	3.6	3.0		3.3	0.3
C13 EO = 9	4.9	11.1		8.0	3.1
C13 EO = 15	0.0	0.0		0.0	0.0
C14 EO = 0	64.9	61.7		63.3	1.6
C14 EO = 1	27.7	13.8		20.7	6.9
C14 EO = 2	0.0	14.6		7.3	7.3
C14 EO = 6	8.2	12.7		10.4	2.2
C14 EO = 9	15.9	25.8		20.8	4.9
C14 EO = 15	4.4	0.0		2.2	2.2
C15 EO = 0	180.5	105.5		143.0	37.5
C15 EO = 1	0.0	0.0		0.0	0.0
C15 EO = 2	0.0	0.0		0.0	0.0
C15 EO = 6	0.0	0.0		0.0	0.0
C15 EO = 9	0.0	0.0		0.0	0.0
C15 EO = 15	0.0	0.0		0.0	0.0
C16 EO = 0	158.7	242.8		200.8	42.0
C16 EO = 1	0.0	0.0		0.0	0.0
C16 EO = 2	0.0	0.0		0.0	0.0
C16 EO = 6	1.4	0.0		0.7	0.7
C16 EO = 9	4.7	0.0		2.4	2.4
C16 EO = 15	1.8	0.0		0.9	0.9
C18 EO = 0	69.8	220.7		145.2	75.5
C18 EO = 1	0.0	0.0		0.0	0.0
C18 EO = 2	0.0	0.0		0.0	0.0
C18 EO = 6	0.0	0.0		0.0	0.0
C18 EO = 9	6.4	0.0		3.2	3.2
C18 EO = 15	13.6	0.0		6.8	6.8
TOTAL AE (OF ABOVE)	713	886		799	248
PRECISION (as percent) =					31%

Note: "0.0" = not detected.

Table 5. AE Sediments and Method Blanks (Continued)

SITE	WILMINGTON, OH - END OF MIXING CENTRIFUGED SEDIMENT - M SEDIMENT		LAB DUPLICATE WILMINGTON, OH - END OF MIXING CENTRIFUGED SEDIMENT - M SEDIMENT				WILMINGTON, OH - END OF MIXING CENTRIFUGED SEDIMENT FINES - M SEDIMENT	
SAMPLE CODE								
MATRIX								
Sequence number:	6		13				9	
File name:	3K17Q006		3K17Q013				3K18Q009	
Lab ID:	AE-S-4 Wilmington Cent Sed-M		AE-S-10 Wilmington Cent Sed-M(Dup)				AE-S-23 Wilmington Sed Fine-M	
Sample weight (g, dry weight)	19.20		19.57		Average (ng/g)	Precision (Range, +/-) (ng/g)	6.02	
Concentration (ng/g, dry weight)								
C12 EO = 0		3.9		2.6	3.3	0.6		104
C12 EO = 1		1.0		0.9	0.9	0.0		40
C12 EO = 2		0.0		2.2	1.1	1.1		28
C12 EO = 3		0.0		0.0	0.0	0.0		41
C12 EO = 6		1.6		1.0	1.3	0.3		23
C12 EO = 9		3.2		2.2	2.7	0.5		29
C12 EO = 12		2.3		1.8	2.1	0.2		11
C12 EO = 15		0.7		1.1	0.9	0.2		2
C13 EO = 0		4.8		3.3	4.0	0.7		65
C13 EO = 1		0.0		0.0	0.0	0.0		8
C13 EO = 2 (INTERFERENCE)		0.0		0.0	0.0	0.0		47
C13 EO = 6		1.3		1.7	1.5	0.2		9
C13 EO = 9		3.1		2.2	2.7	0.5		21
C13 EO = 15		0.0		0.0	0.0	0.0		0.0
C14 EO = 0		2.4		2.0	2.2	0.2		180
C14 EO = 1		0.9		0.6	0.8	0.2		29
C14 EO = 2		0.0		1.0	0.5	0.5		26
C14 EO = 6		1.5		0.8	1.2	0.3		21
C14 EO = 9		2.5		1.8	2.2	0.3		33
C14 EO = 15		0.0		1.9	0.9	0.9		6
C15 EO = 0		4.4		2.8	3.6	0.9		146
C15 EO = 1		0.0		0.0	0.0	0.0		8.5
C15 EO = 2		0.0		0.0	0.0	0.0		0.0
C15 EO = 6		0.0		0.0	0.0	0.0		0.0
C15 EO = 9		0.0		0.0	0.0	0.0		4.6
C15 EO = 15		0.0		0.0	0.0	0.0		0.0
C16 EO = 0		4.0		2.9	3.5	0.5		852
C16 EO = 1		0.0		0.0	0.0	0.0		0.0
C16 EO = 2		0.0		0.0	0.0	0.0		0.0
C16 EO = 6		0.0		0.0	0.0	0.0		3.1
C16 EO = 9		0.0		0.0	0.0	0.0		7.1
C16 EO = 15		0.0		0.0	0.0	0.0		6.2
C18 EO = 0		5.6		4.6	5.1	0.5		731
C18 EO = 1		0.0		0.0	0.0	0.0		0.8
C18 EO = 2		0.0		0.0	0.0	0.0		0.0
C18 EO = 6		0.0		0.0	0.0	0.0		0.0
C18 EO = 9		1.1		0.0	0.5	0.5		5.3
C18 EO = 15		1.5		0.0	0.8	0.8		5.6
TOTAL AE (OF ABOVE)		46		38	42	4		2471
PRECISION (as percent) =						10%		

Note: "0.0" = not detected.

Table 5. AE Sediments and Method Blanks (Continued)

SITE	WILMINGTON, OH - DOWNSTREAM	LAB DUPLICATE WILMINGTON, OH - DOWNSTREAM			
SAMPLE CODE	CENTRIFUGED SEDIMENT - D	CENTRIFUGED SEDIMENT - D			
MATRIX	SEDIMENT	SEDIMENT			
Sequence number:	15	3			
File name:	3K17Q015	3K18Q003			
Lab ID:	AE-S-12 Wilmington Cent Sed-D	AE-S-17 Wilmington Cent Sed-D (DUP)			
Sample weight (g, dry weight)	18.88	18.68		Average (ng/g)	Precision (Range, +/-) (ng/g)
Concentration (ng/g, dry weight)					
C12 EO = 0	2.7	3.3		3.0	0.3
C12 EO = 1	1.3	1.0		1.2	0.1
C12 EO = 2	0.0	0.0		0.0	0.0
C12 EO = 3	0.0	0.0		0.0	0.0
C12 EO = 6	5.8	1.8		3.8	2.0
C12 EO = 9	2.8	3.1		2.9	0.1
C12 EO = 12	4.5	3.2		3.9	0.7
C12 EO = 15	2.3	1.2		1.7	0.6
C13 EO = 0	3.2	2.6		2.9	0.3
C13 EO = 1	0.0	1.1		0.6	0.6
C13 EO = 2 (INTERFERENCE)	0.0	11.9		5.9	5.9
C13 EO = 6	2.9	1.8		2.4	0.5
C13 EO = 9	2.6	3.9		3.2	0.7
C13 EO = 15	0.9	0.0		0.4	0.4
C14 EO = 0	2.3	2.5		2.4	0.1
C14 EO = 1	1.3	1.5		1.4	0.1
C14 EO = 2	0.0	0.0		0.0	0.0
C14 EO = 6	0.9	1.6		1.2	0.4
C14 EO = 9	1.8	4.0		2.9	1.1
C14 EO = 15	0.0	2.3		1.2	1.2
C15 EO = 0	20.3	8.8		14.5	5.8
C15 EO = 1	0.0	0.0		0.0	0.0
C15 EO = 2	0.0	0.0		0.0	0.0
C15 EO = 6	0.0	0.0		0.0	0.0
C15 EO = 9	0.0	0.0		0.0	0.0
C15 EO = 15	0.0	0.0		0.0	0.0
C16 EO = 0	10.7	6.8		8.7	1.9
C16 EO = 1	0.0	0.0		0.0	0.0
C16 EO = 2	0.0	0.0		0.0	0.0
C16 EO = 6	0.0	0.0		0.0	0.0
C16 EO = 9	0.0	0.0		0.0	0.0
C16 EO = 15	0.0	0.0		0.0	0.0
C18 EO = 0	6.1	4.7		5.4	0.7
C18 EO = 1	0.0	0.0		0.0	0.0
C18 EO = 2	0.0	0.0		0.0	0.0
C18 EO = 6	0.0	0.0		0.0	0.0
C18 EO = 9	0.0	0.0		0.0	0.0
C18 EO = 15	0.0	0.0		0.0	0.0
TOTAL AE (OF ABOVE)	72	67		70	3
PRECISION (as percent) =					4%

Note: "0.0" = not detected.

Table 5. AE Sediments and Method Blanks (Continued)

SITE SAMPLE CODE MATRIX	WILMINGTON, OH - DOWNSTREAM CENTRIFUGED SEDIMENT FINES - D SEDIMENT	WILMINGTON, OH - FAR DOWNSTREAM CENTRIFUGED SEDIMENT - F SEDIMENT	LAB DUPLICATE WILMINGTON, OH - FAR DOWNSTREAM CENTRIFUGED SEDIMENT - F SEDIMENT			
Sequence number: File name: Lab ID: Sample weight (g, dry weight)	21 3K18Q021 AE-S-34 Wilmington Sed Fine-D 2.96	23 3K18Q023 AE-S-36 Wilmington Cent Sed-F 18.23	5 3K17Q005 AE-S-3 Wilmington Cent Sed-F(Dup) 20.08	Average (ng/g)	Precision (Range, +/-) (ng/g)	
Concentration (ng/g, dry weight)						
C12 EO = 0	23.7	10.9	3.0	7.0	4.0	
C12 EO = 1	12.0	0.6	0.8	0.7	0.1	
C12 EO = 2	0.0	3.8	1.8	2.8	1.0	
C12 EO = 3	11.4	0.0	1.7	0.9	0.9	
C12 EO = 6	9.2	8.6	1.2	4.9	3.7	
C12 EO = 9	7.5	10.9	1.5	6.2	4.7	
C12 EO = 12	3.2	7.1	1.0	4.1	3.1	
C12 EO = 15	30.7	2.0	0.0	1.0	1.0	
C13 EO = 0	23.7	16.7	3.6	10.2	6.6	
C13 EO = 1	7.2	3.3	0.0	1.6	1.6	
C13 EO = 2 (INTERFERENCE)	113.0	13.2	0.0	6.6	6.6	
C13 EO = 6	0.0	9.4	0.7	5.0	4.3	
C13 EO = 9	6.9	18.6	0.0	9.3	9.3	
C13 EO = 15	0.0	1.9	0.0	1.0	1.0	
C14 EO = 0	21.9	12.6	2.3	7.4	5.2	
C14 EO = 1	17.5	2.4	0.7	1.5	0.9	
C14 EO = 2	0.0	5.8	0.0	2.9	2.9	
C14 EO = 6	12.0	7.4	0.9	4.1	3.3	
C14 EO = 9	20.9	12.7	1.4	7.0	5.7	
C14 EO = 15	0.0	3.0	0.0	1.5	1.5	
C15 EO = 0	81.2	18.0	3.6	10.8	7.2	
C15 EO = 1	0.0	1.5	0.4	0.9	0.6	
C15 EO = 2	0.0	3.3	1.7	2.5	0.8	
C15 EO = 6	0.0	6.1	0.0	3.0	3.0	
C15 EO = 9	0.0	9.0	0.0	4.5	4.5	
C15 EO = 15	0.0	2.0	0.0	1.0	1.0	
C16 EO = 0	72.5	19.0	6.9	13.0	6.1	
C16 EO = 1	0.0	0.2	0.0	0.1	0.1	
C16 EO = 2	0.0	0.3	0.0	0.2	0.2	
C16 EO = 6	0.0	0.0	0.0	0.0	0.0	
C16 EO = 9	3.7	0.0	0.0	0.0	0.0	
C16 EO = 15	4.6	2.9	0.0	1.5	1.5	
C18 EO = 0	56.7	25.1	7.4	16.2	8.8	
C18 EO = 1	0.0	0.6	0.0	0.3	0.3	
C18 EO = 2	0.0	1.2	0.0	0.6	0.6	
C18 EO = 6	2.6	6.3	0.0	3.1	3.1	
C18 EO = 9	6.5	14.8	0.3	7.6	7.2	
C18 EO = 15	11.5	11.0	2.0	6.5	4.5	
TOTAL AE (OF ABOVE)	560	272	43	158	115	
PRECISION (as percent) =					73%	

Note: "0.0" = not detected.

Table 5. AE Sediments and Method Blanks (Continued)

SITE	WILMINGTON, OH - FAR DOWNSTREAM		BRYAN, OH - UPSTREAM (SIDE STREAM COMPOSITE)		BRYAN, OH - UPSTREAM	
SAMPLE CODE	CENTRIFUGED SEDIMENT FINES - F		CENTRIFUGEO SEDIMENT - U		SEDIMENT FINES - U	
MATRIX	SEDIMENT		SEDIMENT		SEDIMENT	
Sequence number:	7		14		6	
File name:	3K19Q007		3K18Q014		3K18Q006	
Lab ID:	AE-S-44 WILMING SED FINE F		AE-S-27 Bryon Cent Sed-U		AE-S-20 BRYAN SED FINE U	
Sample weight (g, dry weight)	3.75		18.90		12.06	
Concentration (ng/g, dry weight)						
C12 EO = 0		390		2.5		28.9
C12 EO = 1		72		0.4		10.5
C12 EO = 2		50		0.0		12.2
C12 EO = 3		49		0.0		14.3
C12 EO = 6		41		0.0		9.6
C12 EO = 9		34		0.5		14.9
C12 EO = 12		15		0.7		7.8
C12 EO = 15		8		0.0		1.5
C13 EO = 0		122		1.9		11.5
C13 EO = 1		10		1.2		2.2
C13 EO = 2 (INTERFERENCE)		132		13.6		22.6
C13 EO = 6		0		0.0		3.1
C13 EO = 9		0		0.0		13.7
C13 EO = 15		0		0.0		0.0
C14 EO = 0		649		2.0		43.1
C14 EO = 1		61		0.0		11.5
C14 EO = 2		41		0.0		6.0
C14 EO = 6		35		1.0		8.5
C14 EO = 9		34		2.5		25.8
C14 EO = 15		8		0.8		5.7
C16 EO = 0		282		4.5		58.4
C15 EO = 1		0		0.0		2.2
C15 EO = 2		0		0.0		0.0
C15 EO = 6		0		0.0		0.0
C15 EO = 9		0		0.0		5.6
C15 EO = 15		0		0.0		2.9
C16 EO = 0		5836		4.3		357.9
C16 EO = 1		0		0.0		0.0
C16 EO = 2		0		0.0		0.0
C16 EO = 6		0		0.0		3.4
C16 EO = 9		0		0.0		19.3
C16 EO = 15		0		1.9		4.6
C18 EO = 0		5045		5.9		317.3
C18 EO = 1		0		0.0		0.3
C18 EO = 2		0		0.0		0.0
C18 EO = 6		0		0.3		5.3
C18 EO = 9		0		1.2		6.9
C18 EO = 15		0		5.0		0.0
TOTAL AE (OF ABOVE)		**12914**		**50**		**1037**
PRECISION (as percent) =						

Note: "0.0" = not detected.

Table 5. AE Sediments and Method Blanks (Continued)

SITE	BRYAN, OH - END OF MIXING	LAB DUPLICATE BRYAN, OH - END OF MIXING			
SAMPLE CODE	CENTRIFUGED SEDIMENT - M	CENTRIFUGED SEDIMENT - M			
MATRIX	SEDIMENT	SEDIMENT			
Sequence number:	19	18			
File name:	3K18Q019	3K18Q018			
Lab ID:	AE-S-32 Bryon Cent Sed-M	AE-S-31 Bryon Cent Sed-M(Dup)			
Sample weight (g, dry weight)	19.80	19.30		Average (ng/g)	Precision (Range, +/-) (ng/g)
Concentration (ng/g, dry weight)					
C12 EO = 0	25.8		47	36.3	10.4
C12 EO = 1	7.5		10	8.7	1.3
C12 EO = 2	5.8		9	7.3	1.5
C12 EO = 3	24.4		14	19.1	5.3
C12 EO = 6	13.5		14	13.8	0.3
C12 EO = 9	18.2		20	18.3	2.1
C12 EO = 12	8.6		11	8.9	2.3
C12 EO = 15	1.0		3	1.8	0.8
C13 EO = 0	8.8		13	11.1	2.4
C13 EO = 1	0.9		2	1.6	0.7
C13 EO = 2 (INTERFERENCE)	14.9		16	15.2	0.4
C13 EO = 6	2.0		2	2.0	0.0
C13 EO = 9	8.6		5	7.0	1.5
C13 EO = 15	0.0		2	0.9	0.9
C14 EO = 0	137.3		61	99.4	37.9
C14 EO = 1	6.4		9	7.5	1.1
C14 EO = 2	0.0		8	4.2	4.2
C14 EO = 6	13.1		8	10.7	2.4
C14 EO = 9	19.6		18	18.8	0.8
C14 EO = 15	2.8		5	3.8	1.0
C15 EO = 0	47.1		59	53.1	6.0
C15 EO = 1	0.0		2	0.9	0.8
C15 EO = 2	0.0		25	12.5	12.5
C15 EO = 6	0.0		1	0.4	0.4
C15 EO = 9	0.0		5	2.6	2.6
C15 EO = 15	0.0		2	1.1	1.1
C16 EO = 0	744.0		145	444.3	299.7
C16 EO = 1	0.4		1	0.5	0.1
C16 EO = 2	0.0		0	0.0	0.0
C16 EO = 6	4.3		2	3.1	1.2
C16 EO = 9	8.8		5	7.0	1.8
C16 EO = 15	2.2		3	2.6	0.4
C18 EO = 0	1786.8		135	960.9	826.0
C18 EO = 1	0.0		0	0.0	0.0
C18 EO = 2	0.0		0	0.0	0.0
C18 EO = 6	2.0		2	1.8	0.2
C18 EO = 9	5.1		5	5.0	0.1
C18 EO = 15	1.3		1	1.2	0.0
TOTAL AE (OF ABOVE)	2917		669	1793	1124
PRECISION (as percent) =					63%

Note: "0.0" = not detected.

Table 5. AE Sediments and Method Blanks (Continued)

SITE	BRYAN, OH - END OF MIXING	BRYAN, OH - DOWNSTREAM	LAB DUPLICATE BRYAN, OH - DOWNSTREAM		
SAMPLE CODE	SEDIMENT FINES - M	CENTRIFUGED SEDIMENT - D	CENTRIFUGED SEDIMENT - D		
MATRIX	SEDIMENT	SEDIMENT	SEDIMENT		
Sequence number:	12	7	3		
File name:	3K18Q012	3K17Q007	3K17Q003		
Lab ID:	AE-S-26 Bryon Sed Fine-M	AE-S-5 Bryon Cent Sed-D	AE-S-1 Bryon Cent Sed-D(Dup)		
Sample weight (g, dry weight)	12.64	18.71	19.95	Average (ng/g)	Precision (Range, +/-) (ng/g)
Concentration (ng/g, dry weight)					
C12 EO = 0	4.1	4.8	4.4	4.6	0.2
C12 EO = 1	2.6	2.0	2.0	2.0	0.0
C12 EO = 2	7.9	2.6	2.4	2.5	0.1
C12 EO = 3	7.3	2.7	3.0	2.8	0.1
C12 EO = 6	3.2	2.6	2.6	2.6	0.0
C12 EO = 9	3.6	3.2	3.4	3.3	0.1
C12 EO = 12	1.9	2.6	3.3	3.0	0.3
C12 EO = 15	0.0	0.6	1.1	0.9	0.2
C13 EO = 0	5.3	5.0	5.0	5.0	0.0
C13 EO = 1	12.3	0.0	0.0	0.0	0.0
C13 EO = 2 (INTERFERENCE)	24.1	0.0	0.0	0.0	0.0
C13 EO = 6	3.0	1.2	0.9	1.0	0.2
C13 EO = 9	6.6	2.1	2.2	2.1	0.1
C13 EO = 15	0.0	0.7	0.0	0.4	0.4
C14 EO = 0	5.1	4.0	4.3	4.2	0.1
C14 EO = 1	4.8	1.9	1.9	1.9	0.0
C14 EO = 2	4.1	1.5	1.5	1.5	0.0
C14 EO = 6	9.8	2.0	2.1	2.0	0.0
C14 EO = 9	11.6	2.8	2.0	2.4	0.4
C14 EO = 15	0.0	0.5	1.3	0.9	0.4
C15 EO = 0	17.6	6.5	4.2	5.3	1.2
C15 EO = 1	0.9	1.1	2.0	1.5	0.4
C15 EO = 2	0.0	2.3	6.1	4.2	1.9
C15 EO = 6	0.0	0.5	0.5	0.5	0.0
C15 EO = 9	0.0	0.4	0.6	0.5	0.1
C15 EO = 15	0.0	0.0	0.6	0.3	0.3
C16 EO = 0	13.2	6.4	6.6	6.5	0.1
C16 EO = 1	0.0	0.1	0.0	0.0	0.0
C16 EO = 2	0.0	0.0	0.0	0.0	0.0
C16 EO = 6	0.0	1.4	0.0	0.7	0.7
C16 EO = 9	0.0	0.9	1.1	1.0	0.1
C16 EO = 15	0.0	1.3	0.8	1.0	0.2
C18 EO = 0	13.3	9.7	7.1	8.4	1.3
C18 EO = 1	0.0	0.0	0.0	0.0	0.0
C18 EO = 2	0.0	0.0	0.0	0.0	0.0
C18 EO = 6	0.0	0.6	0.4	0.5	0.1
C18 EO = 9	1.6	1.3	1.0	1.2	0.1
C18 EO = 15	1.6	2.6	1.4	2.0	0.6
TOTAL AE (OF ABOVE)	165	78	76	77	1
PRECISION (as percent) =					1%

Note: "0.0" = not detected.

Table 5. AE Sediments and Method Blanks (Continued)

SITE	BRYAN, OH - DOWNSTREAM	BRYAN, OH - FAR DOWNSTREAM	BRYAN, OH - FAR DOWNSTREAM
SAMPLE CODE	SEDIMENT FINES - D	CENTRIFUGED SEDIMENT - F	SEDIMENT FINES - F
MATRIX	SEDIMENT	SEDIMENT	SEDIMENT
Sequence number:	11	10	14
File name:	3K18Q011	3K18Q010	3K17Q014
Lab ID:	AE-S-25 Bryon Sed Fine-D	AE-S-24 Bryon Cent Sed-F	AE-S-11 Bryon Sed Fine-F
Sample weight (g, dry weight)	8.96	18.25	12.23
Concentration (ng/g, dry weight)			
C12 EO = 0	7.0	3.3	10.7
C12 EO = 1	2.0	1.9	4.9
C12 EO = 2	0.0	0.0	2.3
C12 EO = 3	0.0	0.0	8.2
C12 EO = 6	3.8	1.8	1.5
C12 EO = 9	4.3	3.3	2.2
C12 EO = 12	4.7	3.0	2.5
C12 EO = 15	0.0	1.5	0.0
C13 EO = 0	6.9	2.5	6.0
C13 EO = 1	1.3	0.6	0.0
C13 EO = 2 (INTERFERENCE)	28.6	11.9	0.0
C13 EO = 6	2.0	2.4	0.0
C13 EO = 9	4.7	2.1	0.0
C13 EO = 15	0.0	0.0	0.0
C14 EO = 0	9.7	2.0	20.3
C14 EO = 1	3.6	0.0	4.7
C14 EO = 2	0.0	0.0	3.4
C14 EO = 6	1.4	3.2	0.6
C14 EO = 9	8.7	2.7	1.8
C14 EO = 15	4.4	0.8	0.0
C15 EO = 0	29.7	14.1	24.1
C15 EO = 1	3.1	0.0	0.0
C15 EO = 2	0.0	0.0	0.0
C15 EO = 6	0.0	0.0	0.0
C15 EO = 9	0.0	0.0	0.0
C15 EO = 15	0.0	0.0	0.0
C16 EO = 0	27.2	6.5	89.0
C16 EO = 1	0.0	0.0	0.0
C16 EO = 2	0.0	0.0	0.0
C16 EO = 6	0.0	0.0	0.0
C16 EO = 9	0.0	0.0	0.0
C16 EO = 15	0.0	0.0	0.0
C18 EO = 0	21.1	5.3	43.9
C18 EO = 1	0.0	0.0	0.0
C18 EO = 2	0.0	0.0	0.0
C18 EO = 6	0.0	0.0	0.0
C18 EO = 9	1.4	0.0	1.3
C18 EO = 15	2.4	0.0	1.4
TOTAL AE (OF ABOVE)	**178**	**69**	**229**
PRECISION (as percent) =			

Note: "0.0" = not detected.

Table 6. AE Sediment Lab Control Spikes

	WILMINGTON LCS			BRYAN LCS			LOWELL LCS		
Sequence number	8			2			31		
File name	3K18Q008			3K19Q002			3K18Q031		
Lab ID	AE-S-22 Wilmington QC-LCS	Theoretical spiked concentration	% RECOVERY	AE-S-39 Bryon QC-LCS	Theoretical spiked concentration	% RECOVERY	AE-S-42 Lowell QC-LCS	Theoretical spiked concentration	% RECOVERY
(assumed sample weight, g)	20.00	20.00		20.00	20.00		20.00	20.00	
Found concentration (ng/g)									
C12 EO = 0	10.3	25.9	40	11.17	25.9	43	60.2	77.7	77
C12 EO = 1	<method blank	2.5	NC	< method blank	2.5	NC	6.5	7.4	87
C12 EO = 2	< method blank	3.9	NC	< method blank	3.9	NC	12.2	11.6	106
C12 EO = 3	<method blank	5.6	NC	< method blank	5.6	NC	19.1	16.9	113
C12 EO = 6	5.6	11.8	47	2.6	11.8	22	35.1	35.3	99
C12 EO = 9	15.1	16.7	90	4.0	16.7	24	52.0	50.2	104
C12 EO = 12	8.6	16.5	52	2.8	16.5	17	45.8	49.5	92
C12 EO = 15	5.5	10.6	51	2.7	10.6	25	31.1	32.4	96
C13 EO = 0	16.9	28.9	58	18.1	28.9	63	93.4	86.8	108
C13 EO = 1	3.2	2.6	125	< method blank	2.6	NC	6.0	7.7	78
C13 EO = 2 (< INTERFERENCE)	< method blank	4.0	NC	< method blank	4.0	NC	7.8	12.0	65
C13 EO = 6	7.2	12.2	59	6.8	12.2	56	36.9	36.6	101
C13 EO = 9	15.6	17.3	90	8.3	17.3	48	76.7	52.0	147
C13 EO = 15	4.7	11.2	42	2.3	11.2	21	32.3	33.6	96
C14 EO = 0	11.3	24.9	45	13.7	24.9	55	64.3	74.6	86
C14 EO = 1	0.9	2.1	40	2.4	2.1	112	7.3	6.4	114
C14 EO = 2	3.0	3.3	90	2.4	3.3	72	11.1	9.9	112
C14 EO = 6	5.5	10.1	55	4.6	10.1	46	26.8	30.3	89
C14 EO = 9	7.5	14.4	52	4.5	14.4	32	39.1	43.1	91
C14 EO = 15	5.5	9.3	59	2.7	9.3	29	25.2	27.8	91
C15 EO = 0	1.0	24.6	4	9.4	24.6	38	63.3	73.7	86
C15 EO = 1	0.7	1.8	40	1.7	1.8	95	7.0	5.3	133
C15 EO = 2	<method blank	2.7	NC	< method blank	2.7	NC	9.8	8.2	119
C15 EO = 6	5.6	8.4	67	6.2	8.4	74	24.4	25.2	97
C15 EO = 9	8.0	12.0	67	6.7	12.0	56	33.6	35.9	94
C15 EO = 15	5.2	7.7	67	3.6	7.7	47	20.6	23.1	89
C16 EO = 0	<method blank	26.6	NC	< method blank	26.6	NC	70.9	79.9	89
C16 EO = 1	0.2	0.3	83	0.3	0.3	98	0.7	0.8	93
C16 EO = 2	0.5	0.7	72	< method blank	0.7	NC	1.9	2.2	83
C16 EO = 6	2.8	4.3	65	3.1	4.3	73	10.3	12.9	80
C16 EO = 9	6.7	8.9	75	5.8	8.9	65	21.7	26.8	81
C16 EO = 15	7.6	10.3	73	5.6	10.3	54	24.9	31.0	80
C18 EO = 0	15.1	30.5	50	< method blank	30.5	NC	87.4	91.5	96
C18 EO = 1	0.6	0.6	92	0.7	0.6	107	1.9	1.8	104
C18 EO = 2	1.4	1.8	79	1.7	1.8	93	5.2	5.4	97
C18 EO = 6	6.7	10.1	67	7.3	10.1	72	23.6	30.2	78
C18 EO = 9	14.5	21.0	69	13.8	21.0	66	51.1	63.1	81
C18 EO = 15	19.0	24.3	78	16.9	24.3	70	63.8	72.8	87
TOTAL AE (OF ABOVE)	222	431	52%	172	431	40%	1211	1292	94%

Note: NC = not calculated.

Lowell LCS spiked 3 times higher than Wilmington and Bryan LCS samples.
LCS concentrations corrected for corresponding method blank before recovery determination.

Table 6. AE Sediment Lab Control Spikes (Continued)

Sequence number
File name
Lab ID
(assumed sample weight, g)

	AVERAGE LCS RECOVERY	PRECISION STD DEV
Found concentration (ng/g)		
C12 EO = 0	53	21
C12 EO = 1	87	NC
C12 EO = 2	106	NC
C12 EO = 3	113	NC
C12 EO = 6	56	39
C12 EO = 9	72	43
C12 EO = 12	54	38
C12 EO = 15	57	36
C13 EO = 0	76	27
C13 EO = 1	102	33
C13 EO = 2 (< INTERFERENCE)	65	NC
C13 EO = 6	72	25
C13 EO = 9	95	50
C13 EO = 15	53	39
C14 EO = 0	62	21
C14 EO = 1	89	42
C14 EO = 2	91	20
C14 EO = 6	63	23
C14 EO = 9	58	30
C14 EO = 15	60	31
C15 EO = 0	43	41
C15 EO = 1	90	46
C15 EO = 2	119	NC
C15 EO = 6	79	16
C15 EO = 9	72	19
C15 EO = 15	68	21
C16 EO = 0	89	NC
C16 EO = 1	91	8
C16 EO = 2	78	10
C16 EO = 6	73	7
C16 EO = 9	74	8
C16 EO = 15	69	14
C18 EO = 0	73	45
C18 EO = 1	101	8
C18 EO = 2	90	9
C18 EO = 6	73	6
C18 EO = 9	72	8
C18 EO = 15	78	9

TOTAL AE (OF ABOVE)

Note; NC = not calculated.

Table 7. AE Sediment Matrix Spike Results

	MATRIX SPIKE FOUND LOWELL UPSTREAM	LOWELL, IN - UPSTREAM CENTRIFUGED SEDIMENT - U SEDIMENT			
Sequence number	15				
File name	3K18Q015	File: 3K18Q005			
Lab ID	AE-S-28 Lowell QC-MS				
Sample weight (g)	15.64				
Sample concentration (ng/g, dry weight)			NET FOUND (ng/g)	THEORY (1) (ng/g)	% RECOVERY
C12 EO = 0	14.3	3.1	11.1	66.3	17
C12 EO = 1	1.9	0.0	1.9	6.3	30
C12 EO = 2	3.4	0.0	3.4	9.8	34
C12 EO = 3	5.8	0.0	5.8	14.4	41
C12 EO = 6	11.0	2.9	8.1	30.1	27
C12 EO = 9	22.6	3.7	18.9	42.8	44
C12 EO = 12	13.9	2.0	11.9	42.2	28
C12 EO = 15	7.2	0.0	7.2	27.6	26
C13 EO = 0	20.9	3.9	17.0	74.0	23
C13 EO = 1	5.1	INT	INT	6.5	INT
C13 EO = 2 (INTERFERENCE)	20.3	INT	INT	10.2	INT
C13 EO = 6	10.6	2.6	8.0	31.2	26
C13 EO = 9	21.5	5.0	16.5	44.4	37
C13 EO = 15	6.1	0.0	6.1	28.6	21
C14 EO = 0	15.9	4.0	11.9	63.6	19
C14 EO = 1	2.4	0.0	2.4	5.4	44
C14 EO = 2	2.8	0.0	2.8	8.4	33
C14 EO = 6	9.4	0.0	9.4	25.8	37
C14 EO = 9	12.8	0.0	12.8	36.7	35
C14 EO = 15	7.0	0.0	7.0	23.7	30
C15 EO = 0	16.8	10.0	6.8	62.9	11
C15 EO = 1	1.6	0.0	1.6	4.5	37
C15 EO = 2	2.1	0.0	2.1	7.0	31
C15 EO = 6	6.4	0.0	8.4	21.5	39
C15 EO = 9	10.9	0.0	10.9	30.6	36
C15 EO = 15	6.8	0.0	6.8	19.7	35
C16 EO = 0	20.3	8.5	11.9	68.1	17
C16 EO = 1	0.3	0.0	0.3	0.7	41
C16 EO = 2	0.6	0.0	0.6	1.9	32
C16 EO = 6	3.8	0.0	3.8	11.0	35
C16 EO = 9	8.2	0.0	8.2	22.8	36
C16 EO = 15	9.0	0.0	9.0	26.4	34
C18 EO = 0	28.0	7.9	20.1	78.0	26
C18 EO = 1	0.6	0.0	0.6	1.6	41
C18 EO = 2	1.7	0.0	1.7	4.6	38
C18 EO = 6	8.7	0.0	8.7	25.8	34
C18 EO = 9	17.7	0.0	17.7	53.8	33
C18 EO = 15	22.7	0.0	22.7	62.0	37
TOTAL AE (OF ABOVE)	**383**	**54**	**304**	**1101**	**28%**

Notes:
INT = interference.
(1) The Lowell QC sample was spiked at twice the concentration of the Wilmington and Bryan QC samples.
(2) The Wilmington QC sample was spiked 4 days prior to freeze-drying step. See discussion in Section 2.1.2.

Table 7. AE Sediment Matrix Spike Results (Continued)

	MATRIX SPIKE FOUND WILMINGTON UPSTREAM	WILMINGTON, OH - UPSTREAM CENTRIFUGED SEDIMENT - U SEDIMENT			
Sequence number	16				
File name	3K18Q016	UNSPIKED CONCN (ng/g)			
Lab ID	AE-S-29 Wilmington QC-MS				
Sample weight (g)	18.19				
Sample concentration (ng/g, dry weight)			NET FOUND (ng/g)	THEORY (ng/g)	% RECOVERY
C12 EO = 0	32.7	4.2	28.5	28.6	100
C12 EO = 1	12.4	1.4	11.0	2.7	402
C12 EO = 2	9.1	1.5	7.6	4.3	178
C12 EO = 3	20.2	3.9	16.3	6.2	263
C12 EO = 6	7.4	2.0	5.3	13.0	41
C12 EO = 9	9.9	3.2	6.7	18.5	36
C12 EO = 12	3.7	2.1	1.6	18.2	9
C12 EO = 15	1.2	0.8	0.4	11.9	3
			0.0		
C13 EO = 0	17.1	5.3	11.8	31.9	37
C13 EO = 1	2.3	2.9	-0.7	2.8	0
C13 EO = 2 (INTERFERENCE)	14.3	14.3	0.0	4.4	0
C13 EO = 6	2.3	1.0	1.3	13.5	10
C13 EO = 9	6.9	2.3	4.6	19.1	24
C13 EO = 15	0.0	0.0	0.0	12.4	0
			0.0		
C14 EO = 0	51.5	4.2	47.3	27.5	172
C14 EO = 1	9.2	2.1	7.1	2.3	302
C14 EO = 2	7.7	0.9	6.7	3.6	185
C14 EO = 6	9.8	1.6	8.2	11.1	73
C14 EO = 9	14.7	3.4	11.3	15.8	72
C14 EO = 15	2.5	0.3	2.2	10.2	21
			0.0		
C15 EO = 0	50.7	11.0	39.8	27.1	147
C15 EO = 1	4.7	0.0	4.7	2.0	243
C15 EO = 2	16.7	0.0	16.7	3.0	550
C15 EO = 6	1.0	0.0	1.0	9.3	11
C15 EO = 9	2.6	0.5	2.1	13.2	16
C15 EO = 15	0.0	0.0	0.0	8.5	0
			0.0		
C16 EO = 0	273.9	27.2	246.7	29.4	839
C16 EO = 1	0.9	0.0	0.9	0.3	327
C16 EO = 2	0.0	0.0	0.0	0.8	0
C16 EO = 6	1.1	0.0	1.1	4.7	24
C16 EO = 9	2.7	0.0	2.7	9.9	27
C16 EO = 15	2.1	0.7	1.4	11.4	12
			0.0		
C18 EO = 0	246.0	29.9	216.2	33.7	642
C18 EO = 1	0.0	0.0	0.0	0.7	0
C18 EO = 2	0.0	0.0	0.0	2.0	0
C18 EO = 6	0.0	0.3	-0.3	11.1	0
C18 EO = 9	2.0	0.9	1.1	23.2	5
C18 EO = 15	5.3	2.3	3.0	26.8	11
TOTAL AE (OF ABOVE)	**845**	**130**	**715**	**475**	**150%**

Notes:
INT = interference.
(1) The Lowell QC sample was spiked at twice the concentration of the Wilmington and Bryan QC samples.
(2) The Wilmington QC sample was spiked 4 days prior to freeze-drying step. See discussion in Section 2.1.2.

Table 7. AE Sediment Matrix Spike Results (Continued)

	MATRIX SPIKE FOUND BRYAN UPSTREAM	(SIDE STREAM COMPOSITE) CENTRIFUGED SEDIMENT - U SEDIMENT			
Sequence number	10	14			
File name	3K17Q010	3K18Q014			
Lab ID	AE-S-8 Bryon QC-MS	AE-S-27 Bryon Cent Sed-U			
Sample weight (g)	19.28	18.90			
Sample concentration (ng/g, dry weight)			NET FOUND (ng/g)	THEORY (ng/g)	% RECOVERY
C12 EO = 0	4.2	2.5	1.7	26.9	6
C12 EO = 1	1.8	0.4	1.3	2.6	52
C12 EO = 2	2.4	0.0	2.4	4.0	61
C12 EO = 3	2.2	0.0	2.2	5.8	37
C12 EO = 6	1.9	0.0	1.9	12.2	15
C12 EO = 9	3.0	0.5	2.5	17.4	14
C12 EO = 12	2.4	0.7	1.7	17.1	10
C12 EO = 15	0.6	0.0	0.6	11.2	5
C13 EO = 0	4.9	1.9	3.0	30.0	10
C13 EO = 1	0.0	1.2	-1.2	2.7	INT
C13 EO = 2 (INTERFERENCE)	0.0	13.6	-13.6	4.1	INT
C13 EO = 6	0.8	0.0	0.8	12.6	6
C13 EO = 9	2.6	0.0	2.6	18.0	14
C13 EO = 15	0.0	0.0	0.0	11.6	0
C14 EO = 0	4.8	2.0	2.7	25.8	10
C14 EO = 1	1.7	0.0	1.7	2.2	76
C14 EO = 2	1.0	0.0	1.0	3.4	28
C14 EO = 6	2.0	1.0	0.9	10.5	9
C14 EO = 9	0.0	2.5	-2.5	14.9	0
C14 EO = 15	0.5	0.8	-0.4	9.6	0
C15 EO = 0	5.9	4.5	1.3	25.5	5
C15 EO = 1	1.0	0.0	1.0	1.8	53
C15 EO = 2	1.6	0.0	1.6	2.9	55
C15 EO = 6	0.4	0.0	0.4	8.7	5
C15 EO = 9	0.5	0.0	0.5	12.4	4
C15 EO = 15	0.0	0.0	0.0	8.0	0
C16 EO = 0	6.2	4.3	2.0	27.6	7
C16 EO = 1	0.0	0.0	0.0	0.3	13
C16 EO = 2	0.0	0.0	0.0	0.6	0
C16 EO = 6	0.0	0.0	0.0	4.5	0
C16 EO = 9	2.1	0.0	2.1	9.3	23
C16 EO = 15	5.9	1.9	4.0	10.7	38
C18 EO = 0	12.2	5.9	6.3	31.6	20
C18 EO = 1	0.0	0.0	0.0	0.6	0
C18 EO = 2	0.0	0.0	0.0	1.9	0
C18 EO = 6	1.9	0.3	1.6	10.4	15
C18 EO = 9	7.0	1.2	5.8	21.8	27
C18 EO = 15	22.0	5.0	16.9	25.2	67
TOTAL AE (OF ABOVE)	**103**	**50**	**53**	**447**	**12%**

Notes:
INT = interference.
(1) The Lowell QC sample was spiked at twice the concentration of the Wilmington and Bryan QC samples.
(2) The Wilmington QC sample was spiked 4 days prior to freeze-drying step. See discussion in Section 2.1.2.

Table 8. LAS and AS/AES Calibration Summary

Concentration (in ug/mL) -- Corrected for % activity and % homologue value.							LINEARITY CORRELATION	CALIBRATION REL. RESPONSE	PRECISION	% ACCURACY CHECK STANDARD	REPORTING LIMIT WATER	REPORTING LIMIT SEDIMENT
Standard ID	STD 0	STD 25	STD 50	STD 100	STD 300	STD 1000	COEFFICIENT	FACTOR	(RSD)		(ng/L)	(ng/g)
										(File: 3J28Q008)		
C10 LAS	0.00	1.28	2.56	5.13	15.38	51.25	1.000	3.94	7	100	6406	128
C11 LAS	0.00	3.37	6.74	13.49	40.47	134.89	0.998	4.18	11	95	16861	337
C12 LAS	0.00	3.36	6.72	13.43	40.30	134.34	0.999	3.93	9	98	16792	336
C13 LAS	0.00	0.55	1.09	2.18	6.55	21.85	1.000	3.30	6	112	2731	55
C14 LAS	0.00	0.11	0.22	0.44	1.33	4.44	1.000	4.43	16	115	555	11
Standard ID	STD 0	STD 10	STD 25	STD 100	STD 300	STD 1000						
										(File: 3J28Q015)		
C12 EO 0	0.000	0.049	0.122	0.489	1.467	4.888	0.995	1.321	23	62	244	4.9
C12 EO2	0.000	0.028	0.070	0.280	0.841	2.805	0.996	1.023	26	64	140	2.8
C12 EO4	0.000	0.011	0.027	0.107	0.321	1.071	0.994	0.726	24	65	54	1.1
C12 EO8	0.000	0.002	0.004	0.016	0.047	0.158	0.997	0.471	22	64	8	0.2
C13 EO 0	0.000	0.052	0.131	0.522	1.567	5.224	0.996	1.208	25	59	261	5.2
C13 EO2	0.000	0.021	0.053	0.211	0.634	2.113	0.996	0.635	21	59	106	2.1
C13 EO4	0.000	0.021	0.051	0.206	0.618	2.059	0.993	1.156	26	64	103	2.1
C13 EO8	0.000	0.001	0.003	0.012	0.037	0.123	0.997	0.347	26	61	6	0.1
C14 EO 0	0.000	0.037	0.093	0.374	1.121	3.738	0.995	1.198	24	61	187	3.7
C14 EO2	0.000	0.015	0.037	0.149	0.446	1.486	0.997	0.541	18	65	74	1.5
C14 EO4	0.000	0.008	0.019	0.078	0.233	0.775	0.995	0.559	21	67	39	0.8
C14 EO8	0.000	0.002	0.005	0.020	0.061	0.202	0.998	0.736	18	61	10	0.2
C15 EO 0	0.000	0.030	0.076	0.304	0.912	3.042	0.994	0.902	25	61	152	3.0
C15 EO2	0.000	0.012	0.031	0.122	0.367	1.225	0.998	0.482	18	68	61	1.2
C15 EO4	0.000	0.005	0.012	0.048	0.144	0.479	0.996	0.379	19	65	24	0.5
C15 EO8	0.000	0.002	0.006	0.022	0.067	0.222	0.999	0.879	15	66	11	0.2

Note: Reporting limits are based on the lowest standard. Results that are below the reporting limit, down to 3:1 S/N, should be considered as estimated values.

Table 9. LAS and AS/AES Results for Method Blanks and Aqueous Samples

SITE FIELD ID MATRIX		LOWELL METHOD BLANK WATER	WILMINGTON METHOD BLANK WATER	BRYAN METHOD BLANK WATER	
Sequence number		18	7	20	
File name		3J23Q018	3J27Q007	3J24Q020	METHOD BLANK
Lab ID	REPORTING	L-15 Lowell QC-MB	W-1 WILM MB	B-16 Bryon QC-MB	AVERAGE
Sample volume	LIMIT WATER (ng/L)	0.2	0.2	0.2	(ng/L)
Concentration, ng/L					
C10 LAS	6406	0.0	0.0	0.0	0
C11 LAS	16861	0.0	0.0	0.0	0
C12 LAS	16792	0.0	0.0	0.0	0
C13 LAS	2731	0.0	0.0	0.0	0
C14 LAS	555	0.0	74.3	0.0	25
TOTAL LAS =	**43346**	**0**	**74**	**0**	**25**
DIFFERENCE (% RANGE/AVG.)					
C12 EO 0	244	24.4	41.2	0.0	22
C12 EO2	140	0.0	0.0	0.0	0
C12 EO4	54	0.0	0.0	0.0	0
C12 EO8	8	0.0	0.0	0.0	0
C13 EO 0	261	0.0	0.0	0.0	0
C13 EO2	106	0.0	0.0	0.0	0
C13 EO4	103	0.0	0.0	0.0	0
C13 EO8	6	0.0	0.0	0.0	0
C14 EO 0	187	0.0	0.0	0.0	0
C14 EO2	74	0.0	0.0	0.0	0
C14 EO4	39	0.0	0.0	0.0	0
C14 EO8	10	0.0	0.0	0.0	0
C15 EO 0	152	0.0	0.0	0.0	0
C15 EO2	61	0.0	0.0	0.0	0
C15 EO4	24	0.0	0.0	0.0	0
C15 EO8	11	0.0	0.0	0.0	0
TOTAL AS/AES (OF ABOVE) =	**1481**	**24**	**41**	**0**	**22**
DIFFERENCE (% RANGE/AVG.)					

Table 9. LAS and AS/AES Results for Method Blanks and Aqueous Samples (Continued)

SITE FIELD ID MATRIX	LOWELL, IN - HOTEL WATER FIELD BLANK - B WATER	LOWELL, IN - UPSTREAM SURF WATER - U WATER	LOWELL, IN - UPSTREAM PORE WATER - U WATER
Sequence number	6	11	5
File name	3J23Q006	3J23Q011	3J23Q005
Lab ID	L-3 Lowell surf water-FB	L-8 Lowell surf water-U	L-2 Lowell Pore water-U
Sample volume	0.2	0.2	0.2
Concentration, ng/L			
C10 LAS	0.0	121.1	505.3
C11 LAS	0.0	290.6	0.0
C12 LAS	0.0	246.0	488.2
C13 LAS	0.0	136.4	181.0
C14 LAS	0.0	0.0	0.0
TOTAL LAS =	**0**	**794**	**1175**
DIFFERENCE (% RANGE/AVG.)			
C12 EO 0	58.0	73.2	149.9
C12 EO2	0.0	0.0	0.0
C12 EO4	0.0	0.0	12.1
C12 EO8	0.0	0.0	0.0
C13 EO 0	0.0	0.0	50.9
C13 EO2	0.0	0.0	5.2
C13 EO4	0.0	0.0	0.0
C13 EO8	0.0	0.0	0.0
C14 EO 0	0.0	0.0	0.0
C14 EO2	0.0	0.0	6.6
C14 EO4	0.0	0.0	0.0
C14 EO8	0.0	0.0	0.0
C15 EO 0	0.0	0.0	0.0
C15 EO2	0.0	0.0	0.0
C15 EO4	0.0	0.0	0.0
C15 EO8	0.0	0.0	0.0
TOTAL AS/AES (OF ABOVE) =	**58**	**73**	**225**
DIFFERENCE (% RANGE/AVG.)			

Table 9. LAS and AS/AES Results for Method Blanks and Aqueous Samples (Continued)

SITE	LOWELL, IN - INFLUENT	LAB DUPLICATE LOWELL, IN - INFLUENT				
FIELD ID	STP INFLUENT - R	STP INFLUENT - R				
MATRIX	WATER	WATER				
Sequence number	7	28				
File name	3J23Q007	3J29Q028				
Lab ID	L-4 Lowell surf water-INF 1:5	10-28-03 water Lowell -INF 1:5				
Sample volume	0.04	0.04				
Concentration, ng/L			AVERAGE	PRECISION (RANGE, +/-)	PRECISION (RANGE %)	
C10 LAS	663292	675225	669259	11933		2
C11 LAS	1416978	1346363	1381670	70615		5
C12 LAS	1316117	1301975	1309046	14141		1
C13 LAS	508702	501406	505054	7296		1
C14 LAS	49935	45113	47524	4822		10
TOTAL LAS =	3955023	3870082	3912553	42470		
DIFFERENCE (% RANGE/AVG.)				1%		
C12 EO 0	25300	20534	22917	4765		21
C12 EO2	35707	30901	33304	4806		14
C12 EO4	9583	7749	8666	1834		21
C12 EO8	1652	1404	1528	248		16
C13 EO 0	10805	9051	9928	1754		18
C13 EO2	14778	10894	12836	3883		30
C13 EO4	7556	5737	6647	1819		27
C13 EO8	448	326	387	122		31
C14 EO 0	23527	22518	23023	1009		4
C14 EO2	15509	12405	13957	3104		22
C14 EO4	6699	4420	5560	2279		41
C14 EO8	1782	1222	1502	559		37
C15 EO 0	28649	28154	28402	496		2
C15 EO2	13475	9811	11643	3664		31
C15 EO4	3447	2401	2924	1046		36
C15 EO8	1279	869	1074	410		38
TOTAL AS/AES (OF ABOVE) =	200195	168397	184296	15899		
DIFFERENCE (% RANGE/AVG.)				9%		

Table 9. LAS and AS/AES Results for Method Blanks and Aqueous Samples (Continued)

SITE FIELD ID MATRIX	LOWELL, IN - EFFLUENT STP EFFLUENT - E WATER	LOWELL, IN - END OF MIXING SURF WATER - M WATER	FIELD DUPLICATE LOWELL, IN - END OF MIXING - DUP SURF WATER - M - DUP WATER		
Sequence number	17	14	10		
File name	3J23Q017	3J23Q014	3J23Q010		
Lab ID	L-14 Lowell surf water-EFF	L-11 Lowell surf water-M	L-7 Lowell surf water-M-Dup	AVERAGE	PRECISION
Sample volume	0.2	0.2	0.2	(ng/L)	(RANGE, +/-)
Concentration, ng/L					
C10 LAS	0.0	0.0	0.0	0.0	0
C11 LAS	620.2	0.0	0.0	0.0	0
C12 LAS	432.2	369.5	314.5	342.0	28
C13 LAS	277.0	201.6	161.9	181.7	20
C14 LAS	0.0	0.0	0.0	0.0	0
TOTAL LAS =	**1329**	**571**	**476**	**524**	**47**
DIFFERENCE (% RANGE/AVG.)					**9%**
C12 EO 0	2201.6	99.8	61.9	80.9	19
C12 EO2	164.6	0.0	0.0	0.0	0
C12 EO4	38.0	0.0	0.0	0.0	0
C12 EO8	0.0	0.0	0.0	0.0	0
C13 EO 0	21.8	27.1	6.5	16.8	10
C13 EO2	0.0	0.0	0.0	0.0	0
C13 EO4	0.0	0.0	0.0	0.0	0
C13 EO8	0.0	0.0	0.0	0.0	0
C14 EO 0	360.5	31.2	0.0	15.6	16
C14 EO2	25.6	0.0	4.2	2.1	2
C14 EO4	7.4	0.0	0.0	0.0	0
C14 EO8	0.0	0.0	0.0	0.0	0
C15 EO 0	20.9	9.8	7.8	8.8	1
C15 EO2	8.3	4.6	3.6	4.1	1
C15 EO4	0.0	0.0	0.0	0.0	0
C15 EO8	0.0	0.0	0.0	0.0	0
TOTAL AS/AES (OF ABOVE) =	**2849**	**173**	**84**	**128**	**44**
DIFFERENCE (% RANGE/AVG.)					**35%**

Table 9. LAS and AS/AES Results for Method Blanks and Aqueous Samples (Continued)

SITE FIELD ID MATRIX	LOWELL, IN - END OF MIXING PORE WATER - M WATER	LOWELL, IN - DISCHARGE SURF. WATER - D WATER	LOWELL, IN - DISCHARGE PORE WATER - D WATER
Sequence number	23	16	9
File name	3J23Q023	3J23Q016	3J23Q009
Lab ID	L-18 Lowell Pore water-M	L-13 Lowell surf water-D	L-6 Lowell Pore water-D
Sample volume	0.2	0.2	0.2
Concentration, ng/L			
C10 LAS	257.9	0.0	504.8
C11 LAS	0.0	0.0	1126.1
C12 LAS	515.3	330.6	925.0
C13 LAS	169.2	234.7	449.5
C14 LAS	0.0	0.0	0.0
TOTAL LAS =	**942**	**565**	**3005**
DIFFERENCE (% RANGE/AVG.)			
C12 EO 0	1212.9	54.9	573.0
C12 EO2	132.3	0.0	153.9
C12 EO4	135.0	2.2	24.2
C12 EO8	0.0	0.0	0.0
C13 EO 0	44.1	0.0	34.4
C13 EO2	5.1	0.0	10.0
C13 EO4	0.0	0.0	0.0
C13 EO8	0.0	0.0	0.0
C14 EO 0	108.7	25.7	143.6
C14 EO2	9.1	0.0	10.9
C14 EO4	24.5	4.7	0.0
C14 EO8	0.0	0.0	0.0
C15 EO 0	17.2	7.2	16.3
C15 EO2	0.0	3.4	4.7
C15 EO4	0.0	0.0	0.0
C15 EO8	0.0	0.0	0.0
TOTAL AS/AES (OF ABOVE) =	**1689**	**98**	**971**
DIFFERENCE (% RANGE/AVG.)			

Table 9. LAS and AS/AES Results for Method Blanks and Aqueous Samples (Continued)

SITE FIELD ID MATRIX	LOWELL, IN - FAR DOWNSTREAM SURF. WATER - F WATER	LOWELL, IN - FAR DOWNSTREAM PORE WATER - F WATER	WILMINGTON, OH - UPSTREAM SURF WATER - U WATER
Sequence number	15	8	18
File name	3J23Q015	3J23Q008	3J27Q018
Lab ID	L-12 Lowell surf water-F	L-5 Lowell Pore water-F	W-14 surf water-U Wilmington
Sample volume	0.2	0.2	0.2
Concentration, ng/L			
C10 LAS	0.0	1457.3	720.9
C11 LAS	0.0	2103.7	1663.6
C12 LAS	186.4	1498.1	1428.4
C13 LAS	73.5	334.3	633.1
C14 LAS	0.0	0.0	61.5
TOTAL LAS =	**260**	**5393**	**4508**
DIFFERENCE (% RANGE/AVG.)			
C12 EO 0	78.2	1152.3	105.2
C12 EO2	0.0	249.4	18.9
C12 EO4	0.0	64.7	8.0
C12 EO8	0.0	4.8	0.0
C13 EO 0	8.7	107.1	12.8
C13 EO2	0.0	29.2	0.0
C13 EO4	0.0	24.3	0.0
C13 EO8	0.0	0.0	0.0
C14 EO 0	0.0	150.3	32.5
C14 EO2	0.0	21.0	6.8
C14 EO4	0.0	16.2	0.0
C14 EO8	0.0	0.0	0.0
C15 EO 0	0.0	30.5	0.0
C15 EO2	0.0	7.7	0.0
C15 EO4	0.0	1.9	0.0
C15 EO8	0.0	0.0	0.7
TOTAL AS/AES (OF ABOVE) =	**87**	**1859**	**185**
DIFFERENCE (% RANGE/AVG.)			

Table 9. LAS and AS/AES Results for Method Blanks and Aqueous Samples (Continued)

SITE	WILMINGTON, OH - UPSTREAM	WILMINGTON, OH - RAW INFLUENT	WILMINGTON, OH - EFFLUENT
FIELD ID	FINAL PORE WATER - U	STP INFLUENT - R	STP EFFLUENT - E
MATRIX	WATER	WATER	WATER
Sequence number	11	14	9
File name	3J27Q011	3J27Q014	3J27Q009
Lab ID	W-6 Pore water-U Wilmington	W-10 surf water-INF 1:5 Wilmi	W-4 surf water-EFF Wilmington
Sample volume	0.2	0.04	0.2
Concentration, ng/L			
C10 LAS	792.0	460694	227.7
C11 LAS	1000.3	996029	648.1
C12 LAS	669.2	1050191	590.0
C13 LAS	205.8	468724	376.2
C14 LAS	47.3	91139	101.3
TOTAL LAS =	**2715**	**3068777**	**1943**
DIFFERENCE (% RANGE/AVG.)			
C12 EO 0	403.3	27220	106.3
C12 EO2	89.3	32067	15.8
C12 EO4	35.4	10000	7.2
C12 EO8	4.7	1885	0.0
C13 EO 0	65.6	10583	9.3
C13 EO2	9.4	12016	0.0
C13 EO4	11.1	6632	0.0
C13 EO8	0.0	425	3.3
C14 EO 0	92.3	22891	67.0
C14 EO2	18.0	10873	7.7
C14 EO4	7.8	5220	1.7
C14 EO8	0.0	1605	0.0
C15 EO 0	12.5	20200	15.7
C15 EO2	4.1	8006	7.3
C15 EO4	0.0	2372	1.4
C15 EO8	0.7	940	0.0
TOTAL AS/AES (OF ABOVE) =	**754**	**172936**	**243**
DIFFERENCE (% RANGE/AVG.)			

Table 9. LAS and AS/AES Results for Method Blanks and Aqueous Samples (Continued)

SITE FIELD ID MATRIX	WILMINGTON, OH - END OF MIXING SURF WATER - M WATER		WILMINGTON, OH - END OF MIXING FINAL PORE WATER - M WATER		WILMINGTON, OH - DOWNSTREAM SURF. WATER - D WATER	
Sequence number	13		19		4	
File name	3J27Q013		3J27Q019		3J23Q004	
Lab ID	W-8 surf water-M Wilmington		W-15 Pore water-M Wilmington		L-1 WILM SURF D	
Sample volume	0.2		0.2		0.2	
Concentration, ng/L						
C10 LAS		0.0		1623.9		0
C11 LAS		0.0		1558.6		0.0
C12 LAS		0.0		1063.9		0.0
C13 LAS		286.4		415.8		235.9
C14 LAS		84.3		57.1		0.0
TOTAL LAS =		**371**		**4719**		**236**
DIFFERENCE (% RANGE/AVG.)						
C12 EO 0		32.9		517.3		9.5
C12 EO2		0.0		107.2		0.0
C12 EO4		0.0		37.3		0.0
C12 EO8		0.0		2.3		0.0
C13 EO 0		0.0		75.4		0.0
C13 EO2		0.0		15.5		0.0
C13 EO4		0.0		11.4		0.0
C13 EO8		0.0		0.0		0.0
C14 EO 0		21.7		119.7		0.0
C14 EO2		0.0		24.4		0.0
C14 EO4		0.0		8.8		0.0
C14 EO8		0.0		0.0		0.0
C15 EO 0		10.2		17.9		0.0
C15 EO2		4.0		5.1		0.0
C15 EO4		0.0		0.0		0.0
C15 EO8		0.0		0.0		0.0
TOTAL AS/AES (OF ABOVE) =		**69**		**942**		**9**
DIFFERENCE (% RANGE/AVG.)						

Table 9. LAS and AS/AES Results for Method Blanks and Aqueous Samples (Continued)

SITE FIELD ID MATRIX	WILMINGTON, OH - DOWNSTREAM FINAL PORE WATER - D WATER	LAB DUPLICATE WILMINGTON, OH - DOWNSTREAM FINAL PORE WATER - D WATER		
Sequence number	15	17		
File name	3J27Q015	3J27Q017		
Lab ID	W-11 Pore water-D Wilmington	W-13 Pore water-D-Dup Wilmingt	AVERAGE (ng/L)	PRECISION (RANGE, +/-)
Sample volume	0.2	0.2		
Concentration, ng/L				
C10 LAS	2753.1	2517.9	2635.5	117.6
C11 LAS	2835.2	2770.8	2803.0	32.2
C12 LAS	2292.6	2083.9	2188.3	104.3
C13 LAS	813.6	737.3	775.4	38.1
C14 LAS	83.4	94.2	88.8	5.4
TOTAL LAS =	**8778**	**8204**	**8491**	**287**
DIFFERENCE (% RANGE/AVG.)				**3%**
C12 EO 0	1057.7	1125.4	1091.5	33.8
C12 EO2	156.5	156.8	156.7	0.2
C12 EO4	48.1	49.7	48.9	0.8
C12 EO8	3.5	3.5	3.5	0.0
C13 EO 0	130.8	128.7	129.8	1.0
C13 EO2	26.8	25.5	26.1	0.7
C13 EO4	20.3	16.6	18.4	1.8
C13 EO8	0.0	0.0	0.0	0.0
C14 EO 0	254.1	231.5	242.8	11.3
C14 EO2	28.5	28.6	28.5	0.0
C14 EO4	13.5	9.8	11.6	1.9
C14 EO8	4.4	0.0	2.2	2.2
C15 EO 0	33.0	31.1	32.1	0.9
C15 EO2	11.7	8.4	10.1	1.7
C15 EO4	3.0	1.2	2.1	0.9
C15 EO8	0.0	0.0	0.0	0.0
TOTAL AS/AES (OF ABOVE) =	**1792**	**1817**	**1804**	**12**
DIFFERENCE (% RANGE/AVG.)				**1%**

Table 9. LAS and AS/AES Results for Method Blanks and Aqueous Samples (Continued)

SITE FIELD ID MATRIX	WILMINGTON, OH - FAR DOWNSTREAM SURF. WATER - F WATER	WILMINGTON, OH - FAR DOWNSTREAM FINAL PORE WATER - F WATER	BRYAN, OH - UPSTREAM SURF WATER - U WATER (SIDE STREAM COMPOSITE)
Sequence number	12	16	7
File name	3J27Q012	3J27Q016	3J24Q007
Lab ID	W-7 WILM SURF WATER-F	W-12 Pore water-F Wilmington	B-1 Bryon surf water-U
Sample volume	0.2	0.2	0.2
Concentration, ng/L			
C10 LAS	0.0	1123.6	1785.9
C11 LAS	255.4	2322.4	3125.4
C12 LAS	260.9	1432.8	2615.6
C13 LAS	83.4	478.4	1965.5
C14 LAS	0.0	62.5	213.7
TOTAL LAS =	**600**	**5420**	**9706**
DIFFERENCE (% RANGE/AVG.)			
C12 EO 0	16.2	1380.8	49.5
C12 EO2	0.0	195.2	21.3
C12 EO4	0.0	67.1	5.3
C12 EO8	0.0	6.1	0.0
C13 EO 0	0.0	97.0	17.8
C13 EO2	0.0	15.8	0.0
C13 EO4	0.0	11.0	0.0
C13 EO8	0.0	0.0	0.0
C14 EO 0	12.6	236.6	49.0
C14 EO2	0.0	21.9	8.6
C14 EO4	0.0	8.1	5.4
C14 EO8	0.0	0.0	0.0
C15 EO 0	0.0	21.9	60.0
C15 EO2	0.0	3.1	9.2
C15 EO4	0.0	0.0	0.0
C15 EO8	0.0	0.0	0.0
TOTAL AS/AES (OF ABOVE) =	**29**	**2065**	**226**
DIFFERENCE (% RANGE/AVG.)			

Table 9. LAS and AS/AES Results for Method Blanks and Aqueous Samples (Continued)

SITE FIELD ID MATRIX	BRYAN, OH - UPSTREAM FINAL PORE WATER - U WATER	BRYAN, OH - RAW INFLUENT STP INFLUENT - R WATER	BRYAN, OH - EFFLUENT STP EFFLUENT - E WATER	BRYAN, OH - END OF MIXING SURF WATER - M WATER
Sequence number	14	19	18	13
File name	3J24Q014	3J24Q019	3J24Q018	3J24Q013
Lab ID	B-9 Bryon Pore water-U	B-15 Bryon surf water-inf 1:5	B-14 Bryon surf water-eff	B-8 Bryon surf water-M
Sample volume	0.2	0.04	0.2	0.2
Concentration, ng/L				
C10 LAS	2652.3	502107	561.9	767.2
C11 LAS	5386.6	1017136	1453.6	1634.0
C12 LAS	2037.6	880381	646.4	1022.0
C13 LAS	535.5	315414	246.9	344.5
C14 LAS	0.0	33675	0.0	0.0
TOTAL LAS =	**10612**	**2748712**	**2909**	**3768**
DIFFERENCE (% RANGE/AVG.)				
C12 EO 0	517.1	27949	186.6	54.5
C12 EO2	184.9	29212	33.6	15.1
C12 EO4	49.7	8982	11.7	4.3
C12 EO8	2.8	1510	0.0	0.0
C13 EO 0	21.4	12201	0.0	5.9
C13 EO2	6.0	10969	0.0	0.0
C13 EO4	0.0	6410	0.0	9.6
C13 EO8	0.0	395	0.0	0.0
C14 EO 0	61.7	18542	73.0	31.4
C14 EO2	8.2	9921	9.0	2.8
C14 EO4	5.0	5014	0.0	0.0
C14 EO8	0.0	1342	0.0	0.0
C15 EO 0	0.0	18516	9.0	29.5
C15 EO2	0.0	8203	5.2	6.2
C15 EO4	0.0	2175	0.0	0.0
C15 EO8	0.0	990	0.0	0.0
TOTAL AS/AES (OF ABOVE) =	**857**	**162331**	**328**	**159**
DIFFERENCE (% RANGE/AVG.)				

Table 9. LAS and AS/AES Results for Method Blanks and Aqueous Samples (Continued)

SITE FIELD ID MATRIX	BRYAN, OH - END OF MIXING FINAL PORE WATER - M WATER	BRYAN, OH - DOWNSTREAM SURF. WATER - D WATER
Sequence number	17	12
File name	3J24Q017	3J24Q012
Lab ID	B-13 Bryon Pore water-M	B-7 Bryon surf water-D
Sample volume	0.2	0.2
Concentration, ng/L		
C10 LAS	3263.0	620.2
C11 LAS	5369.1	1546.3
C12 LAS	2164.4	919.9
C13 LAS	346.5	351.2
C14 LAS	0.0	0.0
TOTAL LAS =	**11143**	**3438**
DIFFERENCE (% RANGE/AVG.)		
C12 EO 0	737.3	63.1
C12 EO2	92.0	28.9
C12 EO4	35.7	11.0
C12 EO8	2.4	1.9
C13 EO 0	44.4	0.0
C13 EO2	13.9	0.0
C13 EO4	12.5	0.0
C13 EO8	0.0	0.0
C14 EO 0	113.6	33.2
C14 EO2	9.6	0.0
C14 EO4	4.6	0.0
C14 EO8	0.0	0.0
C15 EO 0	0.0	11.8
C15 EO2	0.0	0.0
C15 EO4	0.0	0.0
C15 EO8	0.0	0.0
TOTAL AS/AES (OF ABOVE) =	**1066**	**150**
DIFFERENCE (% RANGE/AVG.)		

Table 9. LAS and AS/AES Results for Method Blanks and Aqueous Samples (Continued)

SITE FIELD ID MATRIX	BRYAN, OH - DOWNSTREAM FINAL PORE WATER - D WATER	LAB DUPLICATE BRYAN, OH - DOWNSTREAM FINAL PORE WATER - D WATER		
Sequence number	9	15		
File name	3J24Q009	3J24Q015		
Lab ID	B-4 Bryon Pore water-D	B-10 Bryon Pore water-D-Dup	AVERAGE (ng/L)	PRECISION (RANGE, +/-)
Sample volume	0.2	0.2		
Concentration, ng/L				
C10 LAS	2764.9	2434.4	2599.6	165.3
C11 LAS	4971.7	4870.3	4921.0	50.7
C12 LAS	2726.7	2069.7	2398.2	328.5
C13 LAS	397.5	368.8	383.1	14.3
C14 LAS	0.0	0.0	0.0	0.0
TOTAL LAS =	**10861**	**9743**	**10302**	**559**
DIFFERENCE (% RANGE/AVG.)				**5%**
C12 EO 0	1339.3	1376.7	1358.0	18.7
C12 EO2	135.1	145.4	140.2	5.2
C12 EO4	49.3	56.4	52.8	3.6
C12 EO8	4.8	5.8	5.3	0.5
C13 EO 0	94.3	94.9	94.6	0.3
C13 EO2	19.7	21.7	20.7	1.0
C13 EO4	19.0	17.8	18.4	0.6
C13 EO8	0.0	0.0	0.0	0.0
C14 EO 0	167.3	180.0	173.7	6.4
C14 EO2	19.1	19.1	19.1	0.0
C14 EO4	10.6	10.3	10.5	0.2
C14 EO8	0.0	0.0	0.0	0.0
C15 EO 0	23.6	21.8	22.7	0.9
C15 EO2	6.9	7.4	7.1	0.3
C15 EO4	2.0	1.9	1.9	0.0
C15 EO8	0.0	0.0	0.0	0.0
TOTAL AS/AES (OF ABOVE) =	**1891**	**1959**	**1925**	**34**
DIFFERENCE (% RANGE/AVG.)				**2%**

Table 9. LAS and AS/AES Results for Method Blanks and Aqueous Samples (Continued)

SITE FIELD ID MATRIX	BRYAN, OH - FAR DOWNSTREAM SURF. WATER - F WATER		BRYAN, OH - FAR DOWNSTREAM FINAL PORE WATER - F WATER	
Sequence number	10		11	
File name	3J24Q010		3J24Q011	
Lab ID	B-5 Bryon surf water-F		B-6 Bryon Pore water-F	
Sample volume	0.2		0.2	
Concentration, ng/L				
C10 LAS		596.4		1571.4
C11 LAS		1521.6		2776.8
C12 LAS		953.9		935.5
C13 LAS		350.7		305.4
C14 LAS		0.0		0.0
TOTAL LAS =		**3423**		**5589**
DIFFERENCE (% RANGE/AVG.)				
C12 EO 0		56.6		582.1
C12 EO2		16.3		106.6
C12 EO4		0.0		33.7
C12 EO8		0.0		0.0
C13 EO 0		9.0		38.8
C13 EO2		0.0		4.3
C13 EO4		0.0		0.0
C13 EO8		0.0		0.0
C14 EO 0		33.5		53.6
C14 EO2		3.7		8.6
C14 EO4		0.0		0.0
C14 EO8		0.0		0.0
C15 EO 0		12.6		0.0
C15 EO2		3.3		0.0
C15 EO4		0.0		0.0
C15 EO8		0.0		0.0
TOTAL AS/AES (OF ABOVE) =		**135**		**828**
DIFFERENCE (% RANGE/AVG.)				

Table 10. LAS and AS/AES Water Sample Control Spike Results

	LOWELL WATER LCS			LOWELL WATER LCS		
Sequence number	12.0			22.0		
File name	3J23Q012			3J23Q022		
Lab ID	L-9 Lowell AES/AS QC-LCS			L-17 Lowell LAS QC-LCS		
Sample volume (L)	0.2			0.2		
Concentration, ng/L						
C10 LAS				32678.0	384388.56	9
C11 LAS				90372.3	1011685.72	9
C12 LAS				88393.0	1007524.55	9
C13 LAS				13933.1	163846.27	9
C14 LAS				2803.3	33289.40	8
		THEORY (ng/L)	% RECOVERY (1)			
C12 EO 0	250.3	36663	1			
C12 EO2	206.4	21035	1			
C12 EO4	56.0	8036	1			
C12 EO8	6.8	1185	1			
C13 EO 0	304.6	39181	1			
C13 EO2	115.7	15850	1			
C13 EO4	107.0	15443	1			
C13 EO8	6.3	926	1			
C14 EO 0	207.8	28034	1			
C14 EO2	69.4	11147	1			
C14 EO4	39.4	5814	1			
C14 EO8	12.0	1518	1			
C15 EO 0	172.8	22812	1			
C15 EO2	56.5	9184	1			
C15 EO4	19.2	3592	1			
C15 EO8	9.2	1666	1			

(1) Low recoveries appear related to the amount of methanol added during QC spiking. See discussion in Section 2.2.1.

Table 10. LAS and AS/AES Water Sample Control Spike Results (Continued)

	WILMINGTON WATER LCS				WILMINGTON WATER LCS		
Sequence number	4.0				5.0		
File name	3J27Q004				3J27Q005		
Lab ID	W-2 AS/AES QC-LCS Wilmington				W-9 LAS QC-LCS Wilmington		
Sample volume (L)	0.2				0.2		
Concentration, ng/L						THEORY (ng/L)	% RECOVERY
C10 LAS					78126.0	76877.71	102
C11 LAS					195970.8	202337.14	97
C12 LAS					182219.8	201504.91	90
C13 LAS					28287.9	32769.25	86
C14 LAS					5286.6	6657.88	79
			THEORY (ng/L)	% RECOVERY			
C12 EO 0		1582.8	7332.6	22			
C12 EO2		859.2	4207.0	20			
C12 EO4		366.2	1607.2	23			
C12 EO8		49.2	237.0	21			
C13 EO 0		1505.4	7836.2	19			
C13 EO2		638.1	3170.0	20			
C13 EO4		638.1	3088.6	21			
C13 EO8		35.7	185.2	19			
C14 EO 0		990.0	5606.8	18			
C14 EO2		393.7	2229.4	18			
C14 EO4		203.6	1162.8	18			
C14 EO8		50.6	303.7	17			
C15 EO 0		742.8	4562.5	16			
C15 EO2		248.2	1836.8	14			
C15 EO4		96.4	718.4	13			
C15 EO8		40.7	333.3	12			

(1) Low recoveries appear related to the amount of methanol added during QC spiking. See discussion in Section 2.2.1.

Table 10. LAS and AS/AES Water Sample Control Spike Results (Continued)

	BRYAN WATER LCS			BRYAN WATER LCS		
Sequence number	4.0			5.0		
File name	3J24Q004			3J24Q005		
Lab ID	B-3 AS/AES QC-LCS Bryon			B-11 LAS QC-LCS Bryon		
Sample volume (L)	0.2			0.2	THEORY (ng/L)	% RECOVERY
Concentration, ng/L						
C10 LAS				73450.2	76877.71	96
C11 LAS				184928.9	202337.14	91
C12 LAS				175876.7	201504.91	87
C13 LAS				27929.6	32769.25	85
C14 LAS		THEORY (ng/L)	% RECOVERY	9227.3	6657.88	139
C12 EO 0	1697.7	7332.6	23	41.3		
C12 EO2	899.7	4207.0	21	0.0		
C12 EO4	346.3	1607.2	22	0.0		
C12 EO8	40.5	237.0	17	0.0		
C13 EO 0	1627.5	7836.2	21	0.0		
C13 EO2	635.1	3170.0	20	0.0		
C13 EO4	635.6	3088.6	21	0.0		
C13 EO8	30.2	185.2	16	0.0		
C14 EO 0	1014.7	5606.8	18	0.0		
C14 EO2	411.7	2229.4	18	0.0		
C14 EO4	202.5	1162.8	17	0.0		
C14 EO8	50.2	303.7	17	0.0		
C15 EO 0	824.5	4562.5	18	0.0		
C15 EO2	299.3	1836.8	16	0.0		
C15 EO4	104.5	718.4	15	0.0		
C15 EO8	50.3	333.3	15	0.0		

(1) Low recoveries appear related to the amount of methanol added during QC spiking. See discussion in Section 2.2.1.

Table 10. LAS and AS/AES Water Sample Control Spike Results (Continued)

	LOWELL WATER LCS (RE-PREP 10/28/03)			LOWELL WATER LCS (RE-PREP 10/28/03)		
Sequence number	26			27		
File name	3J29Q026			3J29Q027		
Lab ID	10-28-03 water AES/AS LCS			10-28-03 water LAS LCS		
Sample volume (L)				0		
Concentration, ng/L					THEORY (NG/L)	%RECOVERY
C10 LAS				72409	76878	94
C11 LAS				185548	202337	92
C12 LAS				189182	201505	94
C13 LAS				29050	32769	89
C14 LAS				5346	6658	80
		THEORY (NG/L)	% RECOVERY (1)			
C12 EO 0	3113	36663	8			
C12 EO2	1635	21035	8			
C12 EO4	621	8036	8			
C12 EO8	86	1185	7			
C13 EO 0	3201	39181	8			
C13 EO2	1073	15850	7			
C13 EO4	1137	15443	7			
C13 EO8	55	926	6			
C14 EO 0	2338	28034	8			
C14 EO2	832	11147	7			
C14 EO4	395	5814	7			
C14 EO8	84	1518	6			
C15 EO 0	1775	22812	8			
C15 EO2	568	9184	6			
C15 EO4	216	3592	6			
C15 EO8	85	1666	5			

(1) Low recoveries appear related to the amount of methanol added during QC spiking. See discussion in Section 2.2.1.

Table 10. LAS and AS/AES Water Sample Control Spike Results (Continued)

	LOWELL INFLUENT (RE-PREP 10/28/03)	LOWELL INFLUENT ORIGINAL ANALYSIS (10/3/03)			
Sequence number	28	7			
File name	3J29Q028	3J23Q007			
Lab ID	10-28-03 water Lowell -INF 1:5	L-4 Lowell surf water-INF 1:5			
Sample volume (L)					
Concentration, ng/L			AVERAGE	PRECISION (RANGE, +/-)	PRECISION (RANGE %)
C10 LAS	675225	663292	**669259**	**11933**	**2**
C11 LAS	1346363	1416978	**1381670**	**70615**	**5**
C12 LAS	1301975	1316117	**1309046**	**14141**	**1**
C13 LAS	501406	508702	**505054**	**7296**	**1**
C14 LAS	45113	49935	**47524**	**4822**	**10**
C12 EO 0	20534	25300	**22917**	**4765**	**21**
C12 EO2	30901	35707	**33304**	**4806**	**14**
C12 EO4	7749	9583	**8666**	**1834**	**21**
C12 EO8	1404	1652	**1528**	**248**	**16**
C13 EO 0	9051	10805	**9928**	**1754**	**18**
C13 EO2	10894	14778	**12836**	**3883**	**30**
C13 EO4	5737	7556	**6647**	**1819**	**27**
C13 EO8	326	448	**387**	**122**	**31**
C14 EO 0	22518	23527	**23023**	**1009**	**4**
C14 EO2	12405	15509	**13957**	**3104**	**22**
C14 EO4	4420	6699	**5560**	**2279**	**41**
C14 EO8	1222	1782	**1502**	**559**	**37**
C15 EO 0	28154	28649	**28402**	**496**	**2**
C15 EO2	9811	13475	**11643**	**3664**	**31**
C15 EO4	2401	3447	**2924**	**1046**	**36**
C15 EO8	869	1279	**1074**	**410**	**38**

(1) Low recoveries appear related to the amount of methanol added during QC spiking. See discussion in Section 2.2.1.

Table 11. LAS and AS/AES Water Matrix Spikes

	LOWELL MATRIX SPIKE	LOWELL, IN - UPSTREAM SURF WATER - U WATER				
Sequence number	13	11				
File name	3J23Q013	3J23Q011				
Lab ID	L-10 Lowell AES/AS QC-MS	L-8 Lowell surf water-U				
Sample volume (L)	0.2	0.2				
Concentration, ng/L						
C10 LAS	0	121				
C11 LAS	0	291				
C12 LAS	0	246	NET	THEORETICAL		
C13 LAS	162	136	CONC'N	SPIKE CONC'N	RECOVERY (1)	
C14 LAS	0	0	(ng/L)	(ng/L)	(%)	
C12 EO 0	255.4	73.2	182.2	36663		0
C12 EO2	128.8	0.0	128.8	21035		1
C12 EO4	56.4	0.0	56.4	8036		1
C12 EO8	8.7	0.0	8.7	1185		1
C13 EO 0	304.5	0.0	304.5	39181		1
C13 EO2	111.0	0.0	111.0	15850		1
C13 EO4	113.9	0.0	113.9	15443		1
C13 EO8	6.0	0.0	6.0	926		1
C14 EO 0	225.3	0.0	225.3	28034		1
C14 EO2	86.1	0.0	86.1	11147		1
C14 EO4	42.1	0.0	42.1	5814		1
C14 EO8	13.8	0.0	13.8	1518		1
C15 EO 0	158.1	0.0	158.1	22812		1
C15 EO2	56.3	0.0	56.3	9184		1
C15 EO4	24.5	0.0	24.5	3592		1
C15 EO8	10.7	0.0	10.7	1666		1

(1) Low recoveries appear related to the amount of methanol added during QC spiking. See discussion in Section 2.2.1.

Table 11. LAS and AS/AES Water Matrix Spikes (Continued)

	LOWELL MATRIX SPIKE	LOWELL, IN - UPSTREAM SURF WATER - U WATER			
Sequence number	21	11			
File name	3J23Q021	3J23Q011			
Lab ID	L-16 Lowell LAS QC-MSD	L-8 Lowell surf water-U	NET CONC'N (ng/L)	THEORETICAL SPIKE CONC'N (ng/L)	RECOVERY (1) (%)
Sample volume (L)	0.2	0.2			
Concentration, ng/L					
C10 LAS	37137	121	37016	384389	10
C11 LAS	108071	291	107781	1011686	11
C12 LAS	105648	246	105402	1007525	10
C13 LAS	15706	136	15570	163846	10
C14 LAS	3463	0	3463	33289	10
C12 EO 0	12.7	73.2			
C12 EO2	0.0	0.0			
C12 EO4	0.0	0.0			
C12 EO8	0.0	0.0			
C13 EO 0	0.0	0.0			
C13 EO2	0.0	0.0			
C13 EO4	0.0	0.0			
C13 EO8	0.0	0.0			
C14 EO 0	0.0	0.0			
C14 EO2	0.0	0.0			
C14 EO4	0.0	0.0			
C14 EO8	0.0	0.0			
C15 EO 0	0.0	0.0			
C15 EO2	0.0	0.0			
C15 EO4	0.0	0.0			
C15 EO8	0.0	0.0			

(1) Low recoveries appear related to the amount of methanol added during QC spiking. See discussion in Section 2.2.1.

Table 11. LAS and AS/AES Water Matrix Spikes (Continued)

	WILMINGTON MATRIX SPIKE	WILMINGTON, OH UPSTREAM SURF WATER - U WATER				
Sequence number	8	18				
File name	3J27Q008	3J27Q018				
Lab ID	W-3 AES/AS MS surf water-U W	W-14 surf water-U Wilmington				
Sample volume (L)	0.2	0.2				
Concentration, ng/L						
C10 LAS	707	721				
C11 LAS	2072	1664				
C12 LAS	2138	1428	NET	THEORETICAL		
C13 LAS	953	633	CONC'N	SPIKE CONC'N	RECOVERY	
C14 LAS	537	62	(ng/L)	(ng/L)	(%)	
C12 EO 0	1540.5	105.2	1435.4	7332.6	20	
C12 EO2	806.8	18.9	787.9	4207.0	19	
C12 EO4	356.1	8.0	348.1	1607.2	22	
C12 EO8	46.3	0.0	46.3	237.0	20	
C13 EO 0	1549.4	12.8	1536.5	7836.2	20	
C13 EO2	595.4	0.0	595.4	3170.0	19	
C13 EO4	627.7	0.0	627.7	3088.6	20	
C13 EO8	40.0	0.0	40.0	185.2	22	
C14 EO 0	935.9	32.5	903.3	5606.8	16	
C14 EO2	412.7	6.8	405.9	2229.4	18	
C14 EO4	229.1	0.0	229.1	1162.8	20	
C14 EO8	69.1	0.0	69.1	303.7	23	
C15 EO 0	658.6	0.0	658.6	4562.5	14	
C15 EO2	275.5	0.0	275.5	1836.8	15	
C15 EO4	116.4	0.0	116.4	718.4	16	
C15 EO8	55.8	0.7	55.0	333.3	17	

(1) Low recoveries appear related to the amount of methanol added during QC spiking. See discussion in Section 2.2.1.

Table 11. LAS and AS/AES Water Matrix Spikes (Continued)

	WILMINGTON MATRIX SPIKE	WILMINGTON, OH UPSTREAM SURF WATER - U WATER			
Sequence number	10	18			
File name	3J27Q010	3J27Q018			
Lab ID	W-5 LAS-MS surf water-U Wilm	W-14 surf water-U Wilmington	NET CONC'N (ng/L)	THEORETICAL SPIKE CONC'N (ng/L)	**RECOVERY (%)**
Sample volume (L)	0.2	0.2			
Concentration, ng/L					
C10 LAS	85527	721	84807	76878	**110**
C11 LAS	212346	1664	210683	202337	**104**
C12 LAS	192306	1428	190877	201505	**95**
C13 LAS	26081	633	25448	32769	**78**
C14 LAS	4533	62	4471	6658	**67**
C12 EO 0	125.7	105.2			
C12 EO2	17.2	18.9			
C12 EO4	5.9	8.0			
C12 EO8	0.0	0.0			
C13 EO 0	0.0	12.8			
C13 EO2	0.0	0.0			
C13 EO4	0.0	0.0			
C13 EO8	0.0	0.0			
C14 EO 0	35.8	32.5			
C14 EO2	0.0	6.8			
C14 EO4	0.0	0.0			
C14 EO8	0.0	0.0			
C15 EO 0	8.1	0.0			
C15 EO2	0.0	0.0			
C15 EO4	0.0	0.0			
C15 EO8	0.0	0.7			

(1) Low recoveries appear related to the amount of methanol added during QC spiking. See discussion in Section 2.2.1.

Table 11. LAS and AS/AES Water Matrix Spikes (Continued)

		BRYAN, OH - UPSTREAM SURF WATER - U WATER (SIDE STREAM COMPOSITE)				
Sequence number	16	7				
File name	3J24Q016	3J24Q007				
Lab ID	B-12 Bryon LAS QC-MS-U	B-1 Bryon surf water-U		NET	THEORETICAL	
Sample volume (L)	0.2		0.2	CONC'N (ng/L)	SPIKE CONC'N (ng/L)	**RECOVERY (%)**
Concentration, ng/L						
C10 LAS	83703		1786	81917	76878	**107**
C11 LAS	182591		3125	179466	202337	**89**
C12 LAS	178545		2616	175929	201505	**87**
C13 LAS	26354		1966	24388	32769	**74**
C14 LAS	8086		214	7872	6658	**118**
C12 EO 0	68.4		49.5			
C12 EO2	0.0		21.3			
C12 EO4	0.0		5.3			
C12 EO8	0.0		0.0			
C13 EO 0	7.7		17.8			
C13 EO2	0.0		0.0			
C13 EO4	0.0		0.0			
C13 EO8	0.0		0.0			
C14 EO 0	43.6		49.0			
C14 EO2	5.5		8.6			
C14 EO4	7.6		5.4			
C14 EO8	0.0		0.0			
C15 EO 0	69.0		60.0			
C15 EO2	10.0		9.2			
C15 EO4	0.0		0.0			
C15 EO8	0.0		0.0			

(1) Low recoveries appear related to the amount of methanol added during QC spiking. See discussion in Section 2.2.1.

Table 11. LAS and AS/AES Water Matrix Spikes (Continued)

		BRYAN, OH - UPSTREAM SURF WATER - U WATER (SIDE STREAM COMPOSITE)				
Sequence number	8	7				
File name	3J24Q008	3J24Q007				
Lab ID	B-2 Bryon AES/AS QC-MS	B-1 Bryon surf water-U				
Sample volume (L)	0.2	0.2				
Concentration, ng/L						
C10 LAS	3607	1786				
C11 LAS	6220	3125				
C12 LAS	5979	2616	NET	THEORETICAL		
C13 LAS	3512	1966	CONC'N	SPIKE CONC'N	RECOVERY	
C14 LAS	716	214	(ng/L)	(ng/L)	(%)	
C12 EO 0	1563.8	49.5	1514.3	7333	21	
C12 EO2	747.8	21.3	726.4	4207	17	
C12 EO4	298.8	5.3	293.5	1607	18	
C12 EO8	34.8	0.0	34.8	237	15	
C13 EO 0	1568.0	17.8	1550.3	7836	20	
C13 EO2	518.0	0.0	518.0	3170	16	
C13 EO4	473.6	0.0	473.6	3089	15	
C13 EO8	25.8	0.0	25.8	185	14	
C14 EO 0	880.6	49.0	831.6	5607	15	
C14 EO2	326.9	8.6	318.3	2229	14	
C14 EO4	161.5	5.4	156.1	1163	13	
C14 EO8	46.7	0.0	46.7	304	15	
C15 EO 0	653.4	60.0	593.4	4562	13	
C15 EO2	237.1	9.2	227.9	1837	12	
C15 EO4	91.2	0.0	91.2	718	13	
C15 EO8	44.1	0.0	44.1	333	13	

(1) Low recoveries appear related to the amount of methanol added during QC spiking. See discussion in Section 2.2.1.

Table 12. LAS and AS/AES Method Blank and Sediment Results

SITE SAMPLE CODE MATRIX		LOWELL LAB METHOD BLANK REAGENTS ONLY	WILMINGTON LAB METHOD BLANK REAGENTS ONLY	BRYAN LAB METHOD BLANK REAGENTS ONLY
Sequence # File name Lab ID Sample weight (g, dry wt.)	REPORTING LIMIT SEDIMENT (ng/g)	20 3J28Q020 L-22-S Lowell QC-MB Sed 20	20 3J31Q020 W-14-S Wilmington Sediment QC-MB 20	38 3J31Q038 B-16-S Bryon Sediment QC-MB 20
Concentration, ng/g				
C10 LAS	128.1	0.0	0.0	0.0
C11 LAS	337.2	1.0	0.0	0.0
C12 LAS	335.8	0.0	0.0	0.0
C13 LAS	54.6	0.0	0.0	0.0
C14 LAS	11.1	0.0	0.0	0.0
TOTAL LAS (ng/g)=	**867**	**1**	**0**	**0**
C12 EO 0	4.9	0.0	0.0	0.0
C12 EO2	2.8	0.0	0.0	0.0
C12 EO4	1.1	0.0	0.0	0.0
C12 EO8	0.2	0.0	0.0	0.0
C13 EO 0	5.2	0.0	0.0	0.0
C13 EO2	2.1	0.0	0.0	0.0
C13 EO4	2.1	0.0	0.0	0.0
C13 EO8	0.1	0.0	0.0	0.0
C14 EO 0	3.7	0.0	0.0	0.0
C14 EO2	1.5	0.0	0.0	0.0
C14 EO4	0.8	0.0	0.0	0.0
C14 EO8	0.2	0.0	0.0	0.0
C15 EO 0	3.0	0.0	0.0	0.0
C15 EO2	1.2	0.0	0.0	0.0
C15 EO4	0.5	0.0	0.0	0.0
C15 EO8	0.2	0.0	0.0	0.0
TOTAL AS/AES (OF ABOVE) =	**30**	**0**	**0**	**0**

Note: "0.0" = Not detected at or above 3:1 signal-to-noise.

Table 12. LAS and AS/AES Method Blank and Sediment Results (Continued)

SITE	LOWELL, IN - UPSTREAM	LOWELL, IN - UPSTREAM		
SAMPLE CODE	CENTRIFUGED SEDIMENT - U	CENTRIFUGED SEDIMENT - U		
MATRIX	SEDIMENT	SEDIMENT		
Sequence #	32	33		
File name	3J29Q032	3J29Q033		
Lab ID	L-7-S Lowell Cent. Sediment-U	L-8-S Lowell Cent. Sediment-U- DUP	AVERAGE	PRECISION
Sample weight (g, dry wt.)	16.433	17.024	(ng/g)	(Range, +/-)
Concentration, ng/g				
C10 LAS	29.5	33.8	31.7	2.2
C11 LAS	114.4	152.8	133.6	19.2
C12 LAS	222.9	286.2	254.6	31.6
C13 LAS	170.0	197.6	183.8	13.8
C14 LAS	103.2	119.1	111.1	8.0
TOTAL LAS (ng/g)=	640	790	715	
C12 EO 0	0.0	0.0	0.0	0.0
C12 EO2	0.0	0.0	0.0	0.0
C12 EO4	0.0	0.0	0.0	0.0
C12 EO8	0.1	0.1	0.1	0.0
C13 EO 0	0.0	0.0	0.0	0.0
C13 EO2	0.0	0.0	0.0	0.0
C13 EO4	0.2	0.0	0.1	0.1
C13 EO8	0.0	0.0	0.0	0.0
C14 EO 0	0.6	1.1	0.8	0.2
C14 EO2	0.0	0.0	0.0	0.0
C14 EO4	0.1	0.1	0.1	0.0
C14 EO8	0.1	0.1	0.1	0.0
C15 EO 0	0.0	0.0	0.0	0.0
C15 EO2	0.0	0.0	0.0	0.0
C15 EO4	0.0	0.0	0.0	0.0
C15 EO8	0.0	0.0	0.0	0.0
TOTAL AS/AES (OF ABOVE) =	1	1	1	

Note: "0.0" = Not detected at or above 3:1 signal-to-noise.

Table 12. LAS and AS/AES Method Blank and Sediment Results (Continued)

SITE	LOWELL, IN - UPSTREAM	LOWELL, IN - UPSTREAM		
SAMPLE CODE	CENTRIFUGED SEDIMENT FINES - U	CENTRIFUGED SEDIMENT FINES - U		
MATRIX	SEDIMENT	SEDIMENT		
Sequence #	45	46		
File name	3J29Q045	3J29Q046		
Lab ID	L-14-S Lowell Sediment Fine-U	L-15-S Lowell Sediment Fine-U-DUP	AVERAGE	PRECISION
Sample weight (g, dry wt.)	8.945	8.808	(ng/g)	(Range, +/-)
Concentration, ng/g				
C10 LAS	13.9	10.2	12.0	1.9
C11 LAS	99.5	131.6	115.5	16.0
C12 LAS	180.2	258.9	219.5	39.4
C13 LAS	163.9	222.4	193.2	29.3
C14 LAS	94.0	139.0	116.5	22.5
TOTAL LAS (ng/g)=	551	762	657	
C12 EO 0	5.7	6.2	6.0	0.2
C12 EO2	1.3	1.5	1.4	0.1
C12 EO4	0.4	0.0	0.2	0.2
C12 EO8	0.0	0.0	0.0	0.0
C13 EO 0	0.0	0.0	0.0	0.0
C13 EO2	0.0	0.0	0.0	0.0
C13 EO4	0.0	0.0	0.0	0.0
C13 EO8	0.0	0.0	0.0	0.0
C14 EO 0	7.8	10.3	9.1	1.3
C14 EO2	0.9	1.2	1.0	0.1
C14 EO4	0.0	0.0	0.0	0.0
C14 EO8	0.0	0.0	0.0	0.0
C15 EO 0	2.0	2.7	2.4	0.4
C15 EO2	0.3	0.0	0.2	0.2
C15 EO4	0.0	0.0	0.0	0.0
C15 EO8	0.0	0.0	0.0	0.0
TOTAL AS/AES (OF ABOVE) =	18	22	20	

Note: "0.0" = Not detected at or above 3:1 signal-to-noise.

Table 12. LAS and AS/AES Method Blank and Sediment Results (Continued)

SITE	LOWELL, IN - END OF MIXING CENTRIFUGED SEDIMENT - M	LOWELL, IN - END OF MIXING CENTRIFUGED SEDIMENT - M		
SAMPLE CODE	SEDIMENT	SEDIMENT		
MATRIX				
Sequence #	30	31		
File name	3J29Q030	3J29Q031		
Lab ID	L-6-S Lowell Cent. Sediment-M	L-6-S Lowell Cent. Sediment-M- DUP	AVERAGE	PRECISION
Sample weight (g, dry wt.)	14.241	12.72	(ng/g)	(Range, +/-)
Concentration, ng/g				
C10 LAS	30.8	35.6	33.2	2.4
C11 LAS	20.5	26.0	23.2	2.7
C12 LAS	39.0	40.1	39.6	0.6
C13 LAS	27.4	25.3	26.4	1.1
C14 LAS	13.4	10.0	11.7	1.7
TOTAL LAS (ng/g)=	131	137	134	
C12 EO 0	1.6	2.2	1.9	0.3
C12 EO2	0.0	0.0	0.0	0.0
C12 EO4	0.0	0.0	0.0	0.0
C12 EO8	0.0	0.0	0.0	0.0
C13 EO 0	0.0	0.0	0.0	0.0
C13 EO2	0.0	0.0	0.0	0.0
C13 EO4	0.0	0.0	0.0	0.0
C13 EO8	0.0	0.0	0.0	0.0
C14 EO 0	0.9	1.2	1.0	0.1
C14 EO2	0.0	0.0	0.0	0.0
C14 EO4	0.0	0.0	0.0	0.0
C14 EO8	0.0	0.0	0.0	0.0
C15 EO 0	0.5	0.8	0.6	0.1
C15 EO2	0.0	0.0	0.0	0.0
C15 EO4	0.0	0.0	0.0	0.0
C15 EO8	0.0	0.0	0.0	0.0
TOTAL AS/AES (OF ABOVE) =	3	4	4	

Note: "0.0" = Not detected at or above 3:1 signal-to-noise.

Table 12. LAS and AS/AES Method Blank and Sediment Results (Continued)

SITE	LOWELL, IN - END OF MIXING		LOWELL, IN - END OF MIXING			
SAMPLE CODE	CENTRIFUGED SEDIMENT FINES - M		CENTRIFUGED SEDIMENT FINES - M			
MATRIX	SEDIMENT		SEDIMENT			
Sequence #	43		44			
File name	3J29Q043		3J29Q044			
Lab ID	L-12-S Lowell Sediment Fine-M		L-13-S Lowell Sediment Fine-M- DUP		AVERAGE	PRECISION
Sample weight (g, dry wt.)	9.143		9.347		(ng/g)	(Range, +/-)
Concentration, ng/g						
C10 LAS		71.7		80.3	76.0	4.3
C11 LAS		297.2		288.4	292.8	4.4
C12 LAS		391.7		424.8	408.2	16.5
C13 LAS		110.7		152.5	131.6	20.9
C14 LAS		12.3		16.7	14.5	2.2
TOTAL LAS (ng/g)=		**884**		**963**	**923**	
C12 EO 0		13.8		17.2	15.5	1.7
C12 EO2		3.1		3.8	3.4	0.3
C12 EO4		1.0		1.2	1.1	0.1
C12 EO8		0.0		0.3	0.1	0.1
C13 EO 0		4.9		5.8	5.4	0.5
C13 EO2		1.8		2.4	2.1	0.3
C13 EO4		1.8		2.1	2.0	0.2
C13 EO8		0.0		0.0	0.0	0.0
C14 EO 0		15.8		17.0	16.4	0.6
C14 EO2		2.2		2.4	2.3	0.1
C14 EO4		1.4		1.6	1.5	0.1
C14 EO8		0.3		0.4	0.3	0.0
C15 EO 0		6.4		8.5	6.5	0.1
C15 EO2		1.3		1.3	1.3	0.0
C15 EO4		0.3		0.4	0.4	0.0
C15 EO8		0.1		0.1	0.1	0.0
TOTAL AS/AES (OF ABOVE) =		**54**		**63**	**58**	

Note: "0.0" = Not detected at or above 3:1 signal-to-noise.

Table 12. LAS and AS/AES Method Blank and Sediment Results (Continued)

SITE	LOWELL, IN - DISCHARGE	LOWELL, IN - DISCHARGE		
SAMPLE CODE	CENTRIFUGED SEDIMENT - D	CENTRIFUGED SEDIMENT - D		
MATRIX	SEDIMENT	SEDIMENT		
Sequence #	21	22		
File name	3J28Q021	3J28Q022		
Lab ID	L-1-S Lowell Sediment-D	L-2-S Lowell Sediment-D-Dup	AVERAGE (ng/g)	PRECISION (Range, +/-)
Sample weight (g, dry wt.)	17.163	17.935		
Concentration, ng/g				
C10 LAS	2.9	1.6	2.2	0.7
C11 LAS	35.0	10.1	22.6	12.5
C12 LAS	76.7	16.9	46.8	29.9
C13 LAS	63.6	19.5	41.6	22.0
C14 LAS	35.4	17.9	26.7	8.7
TOTAL LAS (ng/g)=	214	66	140	
C12 EO 0	0.0	0.0	0.0	0.0
C12 EO2	0.0	0.0	0.0	0.0
C12 EO4	0.0	0.0	0.0	0.0
C12 EO8	0.0	0.0	0.0	0.0
C13 EO 0	0.0	0.0	0.0	0.0
C13 EO2	0.0	0.0	0.0	0.0
C13 EO4	0.0	0.0	0.0	0.0
C13 EO8	0.0	0.0	0.0	0.0
C14 EO 0	0.0	0.0	0.0	0.0
C14 EO2	0.0	0.0	0.0	0.0
C14 EO4	0.0	0.0	0.0	0.0
C14 EO8	0.0	0.0	0.0	0.0
C15 EO 0	0.0	0.0	0.0	0.0
C15 EO2	0.0	0.0	0.0	0.0
C15 EO4	0.0	0.0	0.0	0.0
C15 EO8	0.0	0.0	0.0	0.0
TOTAL AS/AES (OF ABOVE) =	0	0	0	

Note: "0.0" = Not detected at or above 3:1 signal-to-noise.

Table 12. LAS and AS/AES Method Blank and Sediment Results (Continued)

SITE	**LOWELL, IN - DISCHARGE**	
SAMPLE CODE	**CENTRIFUGED SEDIMENT FINES - D**	
MATRIX	**SEDIMENT**	
Sequence #	34	
File name	3J29Q034	
Lab ID	L-9-S Lowell Sediment Fine-D	
Sample weight (g, dry wt.)	5.978	
Concentration, ng/g		
C10 LAS		55.0
C11 LAS		232.9
C12 LAS		408.1
C13 LAS		312.5
C14 LAS		221.3
TOTAL LAS (ng/g)=		**1230**
C12 EO 0		22.1
C12 EO2		3.0
C12 EO4		1.1
C12 EO8		0.3
C13 EO 0		4.8
C13 EO2		0.9
C13 EO4		1.0
C13 EO8		0.0
C14 EO 0		36.5
C14 EO2		3.0
C14 EO4		1.6
C14 EO8		0.5
C15 EO 0		10.4
C15 EO2		1.8
C15 EO4		0.6
C15 EO8		0.0
TOTAL AS/AES (OF ABOVE) =		**88**

Note: "0.0" = Not detected at or above 3:1 signal-to-noise.

Table 12. LAS and AS/AES Method Blank and Sediment Results (Continued)

SITE	LOWELL, IN - FAR DOWNSTREAM	LOWELL, IN - FAR DOWNSTREAM		
SAMPLE CODE	CENTRIFUGED SEDIMENT - F	CENTRIFUGED SEDIMENT - F		
MATRIX	SEDIMENT	SEDIMENT		
Sequence #	23	24		
File name	3J28Q023	3J28Q024		
Lab ID	L-3-S Lowell Cent. Sediment-F	L-4-S Lowell Cent. Sediment-F- DUP	AVERAGE (ng/g)	PRECISION (Range, +/-)
Sample weight (g, dry wt.)	15.328	16.082		
Concentration, ng/g				
C10 LAS	8.3	7.6	8.0	0.4
C11 LAS	58.7	51.6	55.2	3.5
C12 LAS	91.0	76.3	83.6	7.4
C13 LAS	68.2	54.5	61.3	6.8
C14 LAS	43.8	35.0	39.4	4.4
TOTAL LAS (ng/g)=	270	225	248	
C12 EO 0	0.8	0.5	0.6	0.2
C12 EO2	0.0	0.0	0.0	0.0
C12 EO4	0.0	0.0	0.0	0.0
C12 EO8	0.1	0.0	0.1	0.1
C13 EO 0	0.0	0.0	0.0	0.0
C13 EO2	0.0	0.0	0.0	0.0
C13 EO4	0.0	0.0	0.0	0.0
C13 EO8	0.0	0.0	0.0	0.0
C14 EO 0	0.0	0.0	0.0	0.0
C14 EO2	0.0	0.0	0.0	0.0
C14 EO4	0.0	0.0	0.0	0.0
C14 EO8	0.0	0.0	0.0	0.0
C15 EO 0	0.0	0.0	0.0	0.0
C15 EO2	0.0	0.0	0.0	0.0
C15 EO4	0.0	0.0	0.0	0.0
C15 EO8	0.0	0.0	0.0	0.0
TOTAL AS/AES (OF ABOVE) =	1	0	1	

Note: "0.0" = Not detected at or above 3:1 signal-to-noise.

Table 12. LAS and AS/AES Method Blank and Sediment Results (Continued)

SITE	LOWELL, IN - FAR DOWNSTREAM		LOWELL, IN - FAR DOWNSTREAM			
SAMPLE CODE	CENTRIFUGED SEDIMENT FINES - F		CENTRIFUGED SEDIMENT FINES - F			
MATRIX	SEDIMENT		SEDIMENT			
Sequence #	35		36			
File name	3J29Q035		3J29Q036			
Lab ID	L-10-S Lowell Sediment Fine-F		L-11-S Lowell Sediment Fine-F- DUP		AVERAGE	PRECISION
Sample weight (g, dry wt.)	7.617		8.108		(ng/g)	(Range, +/-)
Concentration, ng/g						
C10 LAS		228.7		253.7	241.2	12.5
C11 LAS		567.9		626.1	597.0	29.1
C12 LAS		767.6		885.0	826.3	58.7
C13 LAS		276.3		289.6	282.9	6.6
C14 LAS		61.7		68.4	65.1	3.3
TOTAL LAS (ng/g)=		1902		2123	2012	
C12 EO 0		27.0		25.6	26.3	0.7
C12 EO2		8.2		7.9	8.0	0.2
C12 EO4		2.3		2.0	2.2	0.1
C12 EO8		0.2		0.1	0.2	0.0
C13 EO 0		9.1		8.1	8.6	0.5
C13 EO2		3.3		3.8	3.5	0.3
C13 EO4		3.3		3.7	3.5	0.2
C13 EO8		0.2		0.2	0.2	0.0
C14 EO 0		36.6		34.7	35.6	0.9
C14 EO2		6.0		6.8	6.4	0.4
C14 EO4		4.2		4.5	4.3	0.2
C14 EO8		0.8		1.1	0.9	0.2
C15 EO 0		15.5		15.0	15.3	0.3
C15 EO2		2.1		3.3	2.7	0.6
C15 EO4		0.9		1.0	1.0	0.0
C15 EO8		0.7		0.5	0.6	0.1
TOTAL AS/AES (OF ABOVE) =		120		118	119	

Note: "0.0" = Not detected at or above 3:1 signal-to-noise.

Table 12. LAS and AS/AES Method Blank and Sediment Results (Continued)

SITE	WILMINGTON, OH - UPSTREAM	WILMINGTON, OH - UPSTREAM		
SAMPLE CODE	CENTRIFUGED SEDIMENT - U	CENTRIFUGED SEDIMENT - U		
MATRIX	SEDIMENT	SEDIMENT		
Sequence #	13	14		
File name	3J31Q013	3J31Q014		
Lab ID	W-7-S Wilmington Cent Sediment U	W-8-S Wilmington Cent Sediment U DUP (NS)	AVERAGE	PRECISION
Sample weight (g, dry wt.)	17.627	16.82	(ng/g)	(Range, +/-)
Concentration, ng/g				
C10 LAS	52.4	110.0	81.2	28.8
C11 LAS	54.6	101.2	77.9	23.3
C12 LAS	86.7	161.1	123.9	37.2
C13 LAS	56.0	102.6	79.3	23.3
C14 LAS	15.6	26.7	21.1	5.6
TOTAL LAS (ng/g)=	265	502	384	
C12 EO 0	1.0	1.6	1.3	0.3
C12 EO2	0.3	0.0	0.1	0.1
C12 EO4	0.2	0.0	0.1	0.1
C12 EO8	0.0	0.0	0.0	0.0
C13 EO 0	0.0	0.0	0.0	0.0
C13 EO2	0.0	0.0	0.0	0.0
C13 EO4	0.0	0.0	0.0	0.0
C13 EO8	0.0	0.0	0.0	0.0
C14 EO 0	1.7	0.0	0.8	0.8
C14 EO2	0.0	0.0	0.0	0.0
C14 EO4	0.0	0.0	0.0	0.0
C14 EO8	0.0	0.0	0.0	0.0
C15 EO 0	0.0	0.0	0.0	0.0
C15 EO2	0.0	0.0	0.0	0.0
C15 EO4	0.0	0.0	0.0	0.0
C15 EO8	0.0	0.0	0.0	0.0
TOTAL AS/AES (OF ABOVE) =	3	2	2	

Note: "0.0" = Not detected at or above 3:1 signal-to-noise.

Table 12. LAS and AS/AES Method Blank and Sediment Results (Continued)

SITE	**WILMINGTON, OH - UPSTREAM**	
SAMPLE CODE	**CENTRIFUGED SEDIMENT FINES - U**	
MATRIX	**SEDIMENT**	
Sequence #	18	
File name	3J31Q018	
Lab ID	W-12-S Wilmington Sediment FinE U	
Sample weight (g, dry wt.)	10.604	
Concentration, ng/g		
C10 LAS		101.7
C11 LAS		111.3
C12 LAS		162.2
C13 LAS		91.8
C14 LAS		19.4
TOTAL LAS (ng/g)=		**486**
C12 EO 0		4.3
C12 EO2		2.1
C12 EO4		0.6
C12 EO8		0.1
C13 EO 0		2.7
C13 EO2		0.6
C13 EO4		0.4
C13 EO8		0.0
C14 EO 0		11.8
C14 EO2		1.2
C14 EO4		0.7
C14 EO8		0.2
C15 EO 0		4.1
C15 EO2		0.5
C15 EO4		0.0
C15 EO8		0.0
TOTAL AS/AES (OF ABOVE) =		**29**

Note: "0.0" = Not detected at or above 3:1 signal-to-noise.

Table 12. LAS and AS/AES Method Blank and Sediment Results (Continued)

SITE	WILMINGTON, OH - END OF MIXING CENTRIFUGED SEDIMENT - M		WILMINGTON, OH - END OF MIXING CENTRIFUGED SEDIMENT - M			
SAMPLE CODE						
MATRIX	SEDIMENT		SEDIMENT			
Sequence #	17		12			
File name	3J31Q017		3J31Q012			
Lab ID	W-11-S Wilmington Cent SedimenT M		W-6-S Wilmington Cent Sediment M DUP		AVERAGE	PRECISION
Sample weight (g, dry wt.)	18.216		19.609		(ng/g)	(Range, +/-)
Concentration, ng/g						
C10 LAS		24.7		58.3	41.5	16.8
C11 LAS		42.3		95.1	68.7	26.4
C12 LAS		69.1		151.1	110.1	41.0
C13 LAS		49.2		91.0	70.1	20.9
C14 LAS		15.6		28.4	22.0	6.4
TOTAL LAS (ng/g)=		201		424	312	
C12 EO 0		0.0		0.8	0.4	0.4
C12 EO2		0.0		0.0	0.0	0.0
C12 EO4		0.0		0.0	0.0	0.0
C12 EO8		0.0		0.0	0.0	0.0
C13 EO 0		0.0		0.0	0.0	0.0
C13 EO2		0.0		0.0	0.0	0.0
C13 EO4		0.0		0.0	0.0	0.0
C13 EO8		0.0		0.0	0.0	0.0
C14 EO 0		0.0		0.0	0.0	0.0
C14 EO2		0.0		0.0	0.0	0.0
C14 EO4		0.0		0.0	0.0	0.0
C14 EO8		0.0		0.0	0.0	0.0
C15 EO 0		0.0		0.0	0.0	0.0
C15 EO2		0.0		0.0	0.0	0.0
C15 EO4		0.0		0.0	0.0	0.0
C15 EO8		0.0		0.0	0.0	0.0
TOTAL AS/AES (OF ABOVE) =		0		1	0	

Note: "0.0" = Not detected at or above 3:1 signal-to-noise.

Table 12. LAS and AS/AES Method Blank and Sediment Results (Continued)

SITE	WILMINGTON, OH - END OF MIXING	
SAMPLE CODE	CENTRIFUGED SEDIMENT FINES - M	
MATRIX	SEDIMENT	
Sequence #	16	
File name	3J31Q016	
Lab ID	W-10-S Wilmington SEDIMENT FINE F	
Sample weight (g, dry wt.)	3.874	
Concentration, ng/g		
C10 LAS		350.4
C11 LAS		551.6
C12 LAS		881.5
C13 LAS		510.3
C14 LAS		96.6
TOTAL LAS (ng/g)=		2390
C12 EO 0		21.0
C12 EO2		11.0
C12 EO4		3.6
C12 EO8		0.9
C13 EO 0		7.8
C13 EO2		2.2
C13 EO4		1.8
C13 EO8		0.0
C14 EO 0		89.1
C14 EO2		8.3
C14 EO4		4.1
C14 EO8		1.3
C15 EO 0		15.8
C15 EO2		2.9
C15 EO4		0.6
C15 EO8		0.0
TOTAL AS/AES (OF ABOVE) =		171

Note: "0.0" = Not detected at or above 3:1 signal-to-noise.

Table 12. LAS and AS/AES Method Blank and Sediment Results (Continued)

SITE	WILMINGTON, OH - DOWNSTREAM	WILMINGTON, OH - DOWNSTREAM		
SAMPLE CODE	CENTRIFUGED SEDIMENT - D	CENTRIFUGED SEDIMENT - D		
MATRIX	SEDIMENT	SEDIMENT		
Sequence #	7	8		
File name	3J31Q007	3J31Q008		
Lab ID	W-1-S Wilmington Cent Sediment - D	W-2-S Wilmington Cent Sediment - D DUP	AVERAGE (ng/g)	PRECISION (Range, +/-)
Sample weight (g, dry wt.)	18.365	18.622		
Concentration, ng/g				
C10 LAS	420.3	473.0	446.6	26.3
C11 LAS	266.2	245.3	255.8	10.5
C12 LAS	120.0	147.1	133.6	13.6
C13 LAS	81.3	96.7	89.0	7.7
C14 LAS	17.1	26.5	21.8	4.7
TOTAL LAS (ng/g)=	905	989	947	
C12 EO 0	0.2	0.0	0.1	0.1
C12 EO2	0.2	0.0	0.1	0.1
C12 EO4	0.2	0.2	0.2	0.0
C12 EO8	0.1	0.0	0.0	0.0
C13 EO 0	3.3	3.6	3.4	0.1
C13 EO2	0.0	0.0	0.0	0.0
C13 EO4	0.0	0.0	0.0	0.0
C13 EO8	0.0	0.0	0.0	0.0
C14 EO 0	0.0	0.0	0.0	0.0
C14 EO2	0.0	0.0	0.0	0.0
C14 EO4	0.7	0.7	0.7	0.0
C14 EO8	0.1	0.0	0.0	0.0
C15 EO 0	0.3	0.0	0.1	0.1
C15 EO2	0.0	0.0	0.0	0.0
C15 EO4	0.0	0.0	0.0	0.0
C15 EO8	0.0	0.0	0.0	0.0
TOTAL AS/AES (OF ABOVE) =	5	5	5	

Note: "0.0" = Not detected at or above 3:1 signal-to-noise.

Table 12. LAS and AS/AES Method Blank and Sediment Results (Continued)

SITE	**WILMINGTON, OH - DOWNSTREAM**	
SAMPLE CODE	**CENTRIFUGED SEDIMENT FINES - D**	
MATRIX	**SEDIMENT**	
Sequence #	15	
File name	3J31Q015	
Lab ID	W-9-S Wilmington SEDIMENT FINE D	
Sample weight (g, dry wt.)	3.543	
Concentration, ng/g		
C10 LAS		499.5
C11 LAS		661.2
C12 LAS		1383.9
C13 LAS		863.8
C14 LAS		133.1
TOTAL LAS (ng/g)=		**3542**
C12 EO 0		22.8
C12 EO2		9.1
C12 EO4		2.0
C12 EO8		0.5
C13 EO 0		9.4
C13 EO2		2.7
C13 EO4		1.1
C13 EO8		0.0
C14 EO 0		93.9
C14 EO2		9.4
C14 EO4		3.7
C14 EO8		1.1
C15 EO 0		20.8
C15 EO2		4.1
C15 EO4		0.9
C15 EO8		0.0
TOTAL AS/AES (OF ABOVE) =		**181**

Note: "0.0" = Not detected at or above 3:1 signal-to-noise.

Table 12. LAS and AS/AES Method Blank and Sediment Results (Continued)

SITE	WILMINGTON, OH - FAR DOWNSTREAM CENTRIFUGED SEDIMENT - F	WILMINGTON, OH - FAR DOWNSTREAM CENTRIFUGED SEDIMENT - F		
SAMPLE CODE	SEDIMENT	SEDIMENT		
MATRIX				
Sequence #	9	10		
File name	3J31Q009	3J31Q010		
Lab ID	W-3-S Wilmington Cent Sediment - F	W-4-S Wilmington Cent Sediment F DUP	AVERAGE (ng/g)	PRECISION (Range, +/-)
Sample weight (g, dry wt.)	19.469	18.407		
Concentration, ng/g				
C10 LAS	42.3	39.5	40.9	1.4
C11 LAS	70.0	51.4	60.7	9.3
C12 LAS	121.3	82.2	101.7	19.5
C13 LAS	75.7	47.6	61.7	14.0
C14 LAS	21.0	12.2	16.6	4.4
TOTAL LAS (ng/g)=	330	233	282	
C12 EO 0	1.5	1.3	1.4	0.1
C12 EO2	0.2	0.3	0.3	0.1
C12 EO4	0.0	0.2	0.1	0.1
C12 EO8	0.0	0.0	0.0	0.0
C13 EO 0	0.0	0.0	0.0	0.0
C13 EO2	0.0	0.0	0.0	0.0
C13 EO4	0.0	0.0	0.0	0.0
C13 EO8	0.0	0.0	0.0	0.0
C14 EO 0	2.3	1.9	2.1	0.2
C14 EO2	0.0	0.1	0.1	0.1
C14 EO4	0.0	0.0	0.0	0.0
C14 EO8	0.0	0.0	0.0	0.0
C15 EO 0	0.0	0.0	0.0	0.0
C15 EO2	0.0	0.0	0.0	0.0
C15 EO4	0.0	0.0	0.0	0.0
C15 EO8	0.0	0.0	0.0	0.0
TOTAL AS/AES (OF ABOVE) =	4	4	4	

Note: "0.0" = Not detected at or above 3:1 signal-to-noise.

Table 12. LAS and AS/AES Method Blank and Sediment Results (Continued)

SITE	WILMINGTON, OH - FAR DOWNSTREAM		BRYAN, OH - UPSTREAM		BRYAN, OH - UPSTREAM	
SAMPLE CODE	CENTRIFUGED SEDIMENT FINES - F		CENTRIFUGED SEDIMENT - U		SEDIMENT FINES - U	
MATRIX	SEDIMENT		SEDIMENT (SIDE STREAM COMPOSITE)		SEDIMENT	
Sequence #	11		29		33	
File name	3J31Q011		3J31Q029		3J31Q033	
Lab ID	W-5-S Wilmington Sediment Fine F		B-7-S Bryon Cent Sediment-U		B-11-S Bryon Sediment Fine-U	
Sample weight (g, dry wt.)	3.874		20.118		15.463	
Concentration, ng/g						
C10 LAS	990.1		24.4		66.7	
C11 LAS	1009.8		78.4		162.2	
C12 LAS	1691.9		133.9		241.4	
C13 LAS	1030.8		87.7		143.2	
C14 LAS	241.9		20.5		12.6	
TOTAL LAS (ng/g)=	**4965**		**345**		**626**	
C12 EO 0	25.8		1.0		2.5	
C12 EO2	6.1		0.0		2.0	
C12 EO4	2.2		0.2		0.6	
C12 EO8	0.0		0.0		0.1	
C13 EO 0	37.9		0.0		0.9	
C13 EO2	3.5		0.0		0.4	
C13 EO4	1.3		0.0		0.5	
C13 EO8	0.0		0.0		0.0	
C14 EO 0	82.8		0.0		6.9	
C14 EO2	7.3		0.0		0.8	
C14 EO4	3.1		0.1		0.4	
C14 EO8	0.9		0.0		0.2	
C15 EO 0	25.7		0.4		4.5	
C15 EO2	4.8		0.0		0.5	
C15 EO4	1.0		0.0		0.1	
C15 EO8	0.7		0.0		0.1	
TOTAL AS/AES (OF ABOVE) =	**203**		**2**		**20**	

Note: "0.0" = Not detected at or above 3:1 signal-to-noise.

Table 12. LAS and AS/AES Method Blank and Sediment Results (Continued)

SITE SAMPLE CODE MATRIX	BRYAN, OH - END OF MIXING CENTRIFUGED SEDIMENT - M SEDIMENT	BRYAN, OH - END OF MIXING CENTRIFUGED SEDIMENT - M SEDIMENT		
Sequence # File name Lab ID Sample weight (g, dry wt.)	27 3J31Q027 B-5-S Bryon Cent Sediment-M 21.417	28 3J31Q028 B-6-S Bryon Cent Sediment-M-DUP 19.468	AVERAGE (ng/g)	PRECISION (Range, +/-)
Concentration, ng/g				
C10 LAS	37.9	32.8	35.4	2.6
C11 LAS	99.2	106.0	102.6	3.4
C12 LAS	131.4	168.1	149.7	18.4
C13 LAS	87.1	134.3	110.7	23.6
C14 LAS	25.5	54.3	39.9	14.4
TOTAL LAS (ng/g)=	**381**	**496**	**438**	
C12 EO 0	0.4	0.4	0.4	0.0
C12 EO2	0.0	0.0	0.0	0.0
C12 EO4	0.2	0.2	0.2	0.0
C12 EO8	0.0	0.0	0.0	0.0
C13 EO 0	0.0	0.3	0.1	0.1
C13 EO2	0.0	0.0	0.0	0.0
C13 EO4	0.2	0.0	0.1	0.1
C13 EO8	0.0	0.0	0.0	0.0
C14 EO 0	2.6	2.6	2.6	0.0
C14 EO2	0.0	0.0	0.0	0.0
C14 EO4	0.2	0.0	0.1	0.1
C14 EO8	0.0	0.0	0.0	0.0
C15 EO 0	0.4	0.4	0.4	0.0
C15 EO2	0.0	0.0	0.0	0.0
C15 EO4	0.0	0.0	0.0	0.0
C15 EO8	0.0	0.0	0.0	0.0
TOTAL AS/AES (OF ABOVE) =	**4**	**4**	**4**	

Note: "0.0" = Not detected at or above 3:1 signal-to-noise.

Table 12. LAS and AS/AES Method Blank and Sediment Results (Continued)

SITE	**BRYAN, OH - END OF MIXING**	
SAMPLE CODE	**SEDIMENT FINES - M**	
MATRIX	**SEDIMENT**	
Sequence #	32	
File name	3J31Q032	
Lab ID	B-10-S Bryon Sediment Fine-M	
Sample weight (g, dry wt.)	13.027	
Concentration, ng/g		
C10 LAS		107.5
C11 LAS		362.4
C12 LAS		449.8
C13 LAS		174.7
C14 LAS		24.8
TOTAL LAS (ng/g)=		**1119**
C12 EO 0		4.8
C12 EO2		2.3
C12 EO4		0.8
C12 EO8		0.2
C13 EO 0		1.3
C13 EO2		0.7
C13 EO4		0.8
C13 EO8		0.0
C14 EO 0		17.2
C14 EO2		1.6
C14 EO4		0.7
C14 EO8		0.3
C15 EO 0		5.2
C15 EO2		1.0
C15 EO4		0.3
C15 EO8		0.2
TOTAL AS/AES (OF ABOVE) =		**37**

Note: "0.0" = Not detected at or above 3:1 signal-to-noise.

Table 12. LAS and AS/AES Method Blank and Sediment Results (Continued)

SITE	BRYAN, OH - DOWNSTREAM	BRYAN, OH - DOWNSTREAM		
SAMPLE CODE	CENTRIFUGED SEDIMENT - D	CENTRIFUGED SEDIMENT - D		
MATRIX	SEDIMENT	SEDIMENT		
Sequence #	23	24		
File name	3J31Q023	3J31Q024		
Lab ID	B-1-S Bryon Cent Sediment-D	B-2-S Bryon Cent Sediment-D-DUP	AVERAGE	PRECISION
Sample weight (g, dry wt.)	19.777	20.53	(ng/g)	(Range, +/-)
Concentration, ng/g				
C10 LAS	28.4	21.8	25.1	3.3
C11 LAS	74.8	69.4	72.1	2.7
C12 LAS	103.8	107.0	105.4	1.6
C13 LAS	81.1	102.0	91.6	10.5
C14 LAS	27.4	34.4	30.9	3.5
TOTAL LAS (ng/g)=	316	336	325	
C12 EO 0	0.7	0.3	0.5	0.2
C12 EO2	0.0	0.0	0.0	0.0
C12 EO4	0.0	0.1	0.1	0.1
C12 EO8	0.0	0.0	0.0	0.0
C13 EO 0	0.0	0.0	0.0	0.0
C13 EO2	0.0	0.0	0.0	0.0
C13 EO4	0.0	0.0	0.0	0.0
C13 EO8	0.0	0.0	0.0	0.0
C14 EO 0	1.2	1.3	1.3	0.0
C14 EO2	0.0	0.0	0.0	0.0
C14 EO4	0.1	0.0	0.1	0.1
C14 EO8	0.0	0.0	0.0	0.0
C15 EO 0	0.4	0.4	0.4	0.0
C15 EO2	0.0	0.0	0.0	0.0
C15 EO4	0.0	0.0	0.0	0.0
C15 EO8	0.0	0.0	0.0	0.0
TOTAL AS/AES (OF ABOVE) =	2	2	2	

Note: "0.0" = Not detected at or above 3:1 signal-to-noise.

Table 12. LAS and AS/AES Method Blank and Sediment Results (Continued)

SITE	**BRYAN, OH - DOWNSTREAM**	
SAMPLE CODE	**SEDIMENT FINES - D**	
MATRIX	**SEDIMENT**	
Sequence #	30	
File name	3J31Q030	
Lab ID	B-8-S Bryon Sediment Fine-D	
Sample weight (g, dry wt.)	5.811	
Concentration, ng/g		
C10 LAS		373.4
C11 LAS		875.3
C12 LAS		1152.6
C13 LAS		455.5
C14 LAS		47.2
TOTAL LAS (ng/g)=		**2904**
C12 EO 0		18.0
C12 EO2		6.9
C12 EO4		1.6
C12 EO8		0.4
C13 EO 0		5.1
C13 EO2		2.4
C13 EO4		1.7
C13 EO8		0.1
C14 EO 0		55.3
C14 EO2		5.7
C14 EO4		2.4
C14 EO8		0.7
C15 EO 0		17.6
C15 EO2		3.5
C15 EO4		1.0
C15 EO8		0.4
TOTAL AS/AES (OF ABOVE) =		**123**

Note: "0.0" = Not detected at or above 3:1 signal-to-noise.

Table 12. LAS and AS/AES Method Blank and Sediment Results (Continued)

SITE	BRYAN, OH - FAR DOWNSTREAM	BRYAN, OH - FAR DOWNSTREAM		
SAMPLE CODE	CENTRIFUGED SEDIMENT - F	CENTRIFUGED SEDIMENT - F		
MATRIX	SEDIMENT	SEDIMENT		
Sequence #	25	26		
File name	3J31Q025	3J31Q026		
Lab ID	B-3-S Bryon Cent Sediment-F	B-4-S Bryon Cent Sediment-F-DUP	AVERAGE (ng/g)	PRECISION (Range, +/-)
Sample weight (g, dry wt.)	19.044	16.574		
Concentration, ng/g				
C10 LAS	35.3	25.7	30.5	4.8
C11 LAS	93.2	58.1	75.6	17.6
C12 LAS	135.8	102.5	119.1	16.6
C13 LAS	115.3	98.5	106.9	8.4
C14 LAS	39.1	34.0	36.6	2.6
TOTAL LAS (ng/g)=	419	319	369	
C12 EO 0	0.4	0.0	0.2	0.2
C12 EO2	0.0	0.0	0.0	0.0
C12 EO4	0.1	0.0	0.1	0.1
C12 EO8	0.0	0.0	0.0	0.0
C13 EO 0	0.0	0.0	0.0	0.0
C13 EO2	0.0	0.0	0.0	0.0
C13 EO4	0.0	0.0	0.0	0.0
C13 EO8	0.0	0.0	0.0	0.0
C14 EO 0	0.0	2.4	1.2	1.2
C14 EO2	0.0	0.0	0.0	0.0
C14 EO4	0.0	0.0	0.0	0.0
C14 EO8	0.0	0.0	0.0	0.0
C15 EO 0	0.0	0.6	0.3	0.3
C15 EO2	0.0	0.0	0.0	0.0
C15 EO4	0.0	0.0	0.0	0.0
C15 EO8	0.0	0.0	0.0	0.0
TOTAL AS/AES (OF ABOVE) =	1	3	2	

Note: "0.0" = Not detected at or above 3:1 signal-to-noise.

Table 12. LAS and AS/AES Method Blank and Sediment Results (Continued)

SITE	**BRYAN, OH - FAR DOWNSTREAM**	
SAMPLE CODE	**SEDIMENT FINES - F**	
MATRIX	**SEDIMENT**	
Sequence #	31	
File name	3J31Q031	
Lab ID	B-9-S Bryon Sediment Fine-F	
Sample weight (g, dry wt.)	10.327	
Concentration, ng/g		
C10 LAS		67.5
C11 LAS		176.7
C12 LAS		272.8
C13 LAS		197.8
C14 LAS		62.5
TOTAL LAS (ng/g)=		**777**
C12 EO 0		2.4
C12 EO2		1.7
C12 EO4		0.6
C12 EO8		0.1
C13 EO 0		0.0
C13 EO2		0.0
C13 EO4		0.0
C13 EO8		0.0
C14 EO 0		5.0
C14 EO2		0.4
C14 EO4		0.3
C14 EO8		0.0
C15 EO 0		1.6
C15 EO2		0.5
C15 EO4		0.0
C15 EO8		0.0
TOTAL AS/AES (OF ABOVE) =		**12**

Note: "0.0" = Not detected at or above 3:1 signal-to-noise.

Table 13. LAS and AES Sediment Control Spikes

	LOWELL CONTROL SPIKE			LOWELL CONTROL SPIKE		
Sequence #	17			18		
File name	3J28Q017			3J28Q018		
Lab ID	L-20-S Lowell QC-LCS-AES/AS			L-21-S Lowell QC-LCS-LAS		
Sample weight (g)	20.0			20.0	THEORY (ng/g)	% RECOVERY
Concentration, ng/L						
C10 LAS				3626.2	3844	94
C11 LAS				8921.5	10117	88
C12 LAS				9487.9	10075	94
C13 LAS				1742.7	1638	106
C14 LAS		THEORY (ng/g)	% RECOVERY (1)	355.5	333	107
C12 EO 0	35.4	366.6	10			
C12 EO2	20.0	210.3	9			
C12 EO4	7.9	80.4	10			
C12 EO8	1.0	11.9	9			
C13 EO 0	36.1	391.8	9			
C13 EO2	13.9	158.5	9			
C13 EO4	15.4	154.4	10			
C13 EO8	0.7	9.3	8			
C14 EO 0	26.2	280.3	9			
C14 EO2	10.4	111.5	9			
C14 EO4	5.5	58.1	9			
C14 EO8	1.5	15.2	10			
C15 EO 0	21.3	228.1	9			
C15 EO2	8.2	91.8	9			
C15 EO4	3.1	35.9	9			
C15 EO8	1.4	16.7	9			

(1) Low QC recoveries for AS/AES are attributed to loss during final evaporation step or degradation of the spiking standard. See discussion in Section 2.2.2.

Table 13. LAS and AES Sediment Control Spikes (Continued)

	WILMINGTON CONTROL SPIKE			WILMINGTON CONTROL SPIKE		
Sequence #	6			5		
File name	3J31Q006			3J31Q005		
Lab ID	W-16-S Wilmington QC-LCS-AS/AES			W-15-S Wilmington QC-LCS-LAS		
Sample weight (g)	20.0			20.0		
Concentration, ng/L					THEORY (ng/g)	% RECOVERY
C10 LAS				837.2	768.8	109
C11 LAS				2203.4	2023.4	109
C12 LAS				2177.8	2015.0	108
C13 LAS				337.0	327.7	103
C14 LAS		THEORY (ng/g)	% RECOVERY (1)	66.2	66.6	99
C12 EO 0	21.1	73.3	29			
C12 EO2	9.4	42.1	22			
C12 EO4	3.1	16.1	19			
C12 EO8	0.4	2.4	15			
C13 EO 0	21.2	78.4	27			
C13 EO2	6.2	31.7	20			
C13 EO4	5.6	30.9	18			
C13 EO8	0.3	1.9	14			
C14 EO 0	15.0	56.1	27			
C14 EO2	4.4	22.3	20			
C14 EO4	1.9	11.6	17			
C14 EO8	0.5	3.0	15			
C15 EO 0	11.1	45.6	24			
C15 EO2	3.3	18.4	18			
C15 EO4	1.1	7.2	15			
C15 EO8	0.4	3.3	13			

(1) Low QC recoveries for AS/AES are attributed to loss during final evaporation step or degradation of the spiking standard. See discussion in Section 2.2.2.

Table 13. LAS and AES Sediment Control Spikes (Continued)

	BRYAN CONTROL SPIKE			BRYAN CONTROL SPIKE		
Sequence #	36			34		
File name	3J31Q036			3J31Q034		
Lab ID	B-14-S Bryon Sediment QC-LCS-AS/AES			B-12-S Bryon Sediment QC-LCS-LAS		
Sample weight (g)	20.0			20.0	THEORY (ng/g)	% RECOVERY
Concentration, ng/L						
C10 LAS				721.6	768.8	94
C11 LAS				1971.6	2023.4	97
C12 LAS				2038.5	2015.0	101
C13 LAS				329.9	327.7	101
C14 LAS		THEORY (ng/g)	% RECOVERY (1)	63.2	66.6	95
C12 EO 0	21.7	73.3	30			
C12 EO2	9.7	42.1	23			
C12 EO4	3.3	16.1	21			
C12 EO8	0.3	2.4	14			
C13 EO 0	20.0	78.4	26			
C13 EO2	6.7	31.7	21			
C13 EO4	6.5	30.9	21			
C13 EO8	0.3	1.9	16			
C14 EO 0	14.5	56.1	26			
C14 EO2	4.6	22.3	21			
C14 EO4	2.1	11.6	18			
C14 EO8	0.5	3.0	16			
C15 EO 0	11.0	45.6	24			
C15 EO2	3.5	18.4	19			
C15 EO4	1.2	7.2	17			
C15 EO8	0.4	3.3	11			

(1) Low QC recoveries for AS/AES are attributed to loss during final evaporation step or degradation of the spiking standard. See discussion in Section 2.2.2.

Table 14. LAS and AES Sediment Matrix Spikes

	LOWELL MATRIX SPIKE	LOWELL, IN - UPSTREAM CENTRIFUGED SEDIMENT - U SEDIMENT				
Sequence #	47.0	33				
File name	3J29Q047	3J29Q033				
Lab ID	L-16-S Lowell Sediment QC-MS-AS/AES (CENT U)	L-8-S Lowell Cent. Sediment-U- DUP				
Sample weight (g)	16.4	17.024				
Concentration, ng/g						
C10 LAS	0.0	31.7				
C11 LAS	0.0	133.6				
C12 LAS	0.0	254.6	NET	THEORETICAL		
C13 LAS	485.0	183.8	CONC'N	CONC'N	RECOVERY (1)	
C14 LAS	325.1	111.1	(ng/g)	(ng/g)	(%)	
C12 EO 0	159.8	0.0	159.8	366.6	44	
C12 EO2	46.9	0.0	46.9	210.3	22	
C12 EO4	21.7	0.0	21.7	80.4	27	
C12 EO8	1.6	0.1	1.5	11.9	13	
C13 EO 0	149.0	0.0	149.0	391.8	38	
C13 EO2	43.2	0.0	43.2	158.5	27	
C13 EO4	37.3	0.1	37.2	154.4	24	
C13 EO8	0.9	0.0	0.9	9.3	10	
C14 EO 0	74.7	0.8	73.9	280.3	26	
C14 EO2	28.3	0.0	28.3	111.5	25	
C14 EO4	15.7	0.1	15.6	58.1	27	
C14 EO8	3.6	0.1	3.5	15.2	23	
C15 EO 0	66.6	0.0	66.6	228.1	29	
C15 EO2	24.4	0.0	24.4	91.8	27	
C15 EO4	8.5	0.0	8.5	35.9	24	
C15 EO8	2.9	0.0	2.9	16.7	18	

(1) Low recoveries appear to be related to nitrogen blow-down step or degradation of spiking standard. See discussion in Section 2.2.2.

Table 14. LAS and AES Sediment Matrix Spikes (Continued)

	LOWELL MATRIX SPIKE	LOWELL, IN - UPSTREAM CENTRIFUGED SEDIMENT - U SEDIMENT			
Sequence #	48.0	33			
File name	3J29Q048	3J29Q033			
Lab ID	L-17-S Lowell Sediment QC-MSD-AS/AES ((CENT U)	L-8-S Lowell Cent. Sediment-U- DUP			
Sample weight (g)	17.0	17.024			
Concentration, ng/g					
C10 LAS	16.9	31.7			
C11 LAS	108.3	133.6			
C12 LAS	215.8	254.6	NET	THEORETICAL	
C13 LAS	226.5	183.8	CONC'N	CONC'N	RECOVERY (1)
C14 LAS	137.0	111.1	(ng/g)	(ng/g)	(%)
C12 EO 0	47.6	0.0	47.6	366.6	13
C12 EO2	19.5	0.0	19.5	210.3	9
C12 EO4	6.6	0.0	6.6	80.4	8
C12 EO8	0.7	0.1	0.6	11.9	5
C13 EO 0	42.4	0.0	42.4	391.8	11
C13 EO2	12.4	0.0	12.4	158.5	8
C13 EO4	12.5	0.1	12.3	154.4	8
C13 EO8	0.5	0.0	0.5	9.3	5
C14 EO 0	27.0	0.8	26.2	280.3	9
C14 EO2	8.5	0.0	8.5	111.5	8
C14 EO4	3.8	0.1	3.7	58.1	6
C14 EO8	0.8	0.1	0.7	15.2	5
C15 EO 0	16.2	0.0	16.2	228.1	7
C15 EO2	5.3	0.0	5.3	91.8	6
C15 EO4	1.8	0.0	1.8	35.9	5
C15 EO8	0.6	0.0	0.6	16.7	3

(1) Low recoveries appear to be related to nitrogen blow-down step or degradation of spiking standard. See discussion in Section 2.2.2.

Table 14. LAS and AES Sediment Matrix Spikes (Continued)

	LOWELL MATRIX SPIKE	LOWELL, IN - UPSTREAM CENTRIFUGED SEDIMENT - U SEDIMENT				
Sequence #	49.0					
File name	3J29Q049					
Lab ID	L-18-S Lowell Sediment QC-MS-LAS (CENT U)					
Sample weight (g)	16.0					
				NET CONC'N (ng/g)	THEORETICAL CONC'N (ng/g)	RECOVERY (%)
Concentration, ng/g						
C10 LAS	4439.2	31.7	4407.5	3843.9		115
C11 LAS	10197.1	133.6	10063.5	10116.9		99
C12 LAS	10130.6	254.6	9876.0	10075.2		98
C13 LAS	1872.5	183.8	1688.7	1638.5		103
C14 LAS	442.4	111.1	331.2	332.9		100
C12 EO 0						
C12 EO2						
C12 EO4						
C12 EO8						
C13 EO 0						
C13 EO2						
C13 EO4						
C13 EO8						
C14 EO 0						
C14 EO2						
C14 EO4						
C14 EO8						
C15 EO 0						
C15 EO2						
C15 EO4						
C15 EO8						

(1) Low recoveries appear to be related to nitrogen blow-down step or degradation of spiking standard. See discussion in Section 2.2.2.

Table 14. LAS and AES Sediment Matrix Spikes (Continued)

	LOWELL MATRIX SPIKE	LOWELL, IN - UPSTREAM CENTRIFUGED SEDIMENT - U SEDIMENT			
Sequence #	50.0				
File name	3J29Q050				
Lab ID	L-19-S Lowell Sediment QC-MSD-LAS (CENT U)				
Sample weight (g)	16.1				
			NET CONC'N (ng/g)	THEORETICAL CONC'N (ng/g)	RECOVERY (%)
Concentration, ng/g					
C10 LAS	4311.4	31.7	4279.8	3843.9	111
C11 LAS	10659.2	133.6	10525.6	10116.9	104
C12 LAS	10410.8	254.6	10156.3	10075.2	101
C13 LAS	1969.3	183.8	1785.6	1638.5	109
C14 LAS	475.9	111.1	364.7	332.9	110
C12 EO 0					
C12 EO2					
C12 EO4					
C12 EO8					
C13 EO 0					
C13 EO2					
C13 EO4					
C13 EO8					
C14 EO 0					
C14 EO2					
C14 EO4					
C14 EO8					
C15 EO 0					
C15 EO2					
C15 EO4					
C15 EO8					

(1) Low recoveries appear to be related to nitrogen blow-down step or degradation of spiking standard. See discussion in Section 2.2.2.

Table 14. LAS and AES Sediment Matrix Spikes (Continued)

		WILMINGTON, OH - UPSTREAM CENTRIFUGED SEDIMENT - U SEDIMENT				
Sequence #						
File name	4.0	14				
Lab ID	3J31Q004	3J31Q014				
Sample weight (g)	W-17-S Wilmington QC-MS - AS/AES (CENT SED U) -R	W-8-S Wilmington Cent Sediment U DUP (NS)				
Concentration, ng/g	16.0	16.82				
C10 LAS						
C11 LAS	94.9		61.2			
C12 LAS	74.4		77.9			
C13 LAS	111.8		123.9	NET	THEORETICAL	
C14 LAS	60.3		79.3	CONC'N	CONC'N	RECOVERY (1)
	11.6		21.1	(ng/g)	(ng/g)	(%)
C12 EO 0						
C12 EO2	27.4		1.3	26.2	73.3	36
C12 EO4	9.7		0.1	9.6	42.1	23
C12 EO8	3.2		0.1	3.1	16.1	19
C13 EO 0						
C13 EO2	23.4		0.0	23.4	78.4	30
C13 EO4	6.0		0.0	6.0	31.7	19
C13 EO8	5.2		0.0	5.2	30.9	17
C14 EO 0						
C14 EO2	14.5		0.8	13.7	56.1	24
C14 EO4	3.8		0.0	3.8	22.3	17
C14 EO8	1.5		0.0	1.5	11.6	13
C15 EO 0						
C15 EO2	7.3		0.0	7.3	45.6	16
C15 EO4	1.7		0.0	1.7	18.4	9
C15 EO8	0.5		0.0	0.5	7.2	7
	0.2		0.0	0.2	3.3	6

(1) Low recoveries appear to be related to nitrogen blow-down step or degradation of spiking standard. See discussion in Section 2.2.2.

Table 14. LAS and AES Sediment Matrix Spikes (Continued)

	WILMINGTON MATRIX SPIKE	WILMINGTON, OH - UPSTREAM CENTRIFUGED SEDIMENT - U SEDIMENT				
Sequence #						
File name	19.0					
Lab ID	3J31Q019					
Sample weight (g)	W-13-S QC MS LAS R (CENT SED U)			NET CONC'N (ng/g)	THEORETICAL CONC'N (ng/g)	RECOVERY (%)
Concentration, ng/g	14.9					
C10 LAS						
C11 LAS	1060.2		81.2	978.9	768.8	127
C12 LAS	2811.6		77.9	2733.6	2023.4	135
C13 LAS	2697.1		123.9	2573.2	2015.0	128
C14 LAS	314.0		79.3	234.7	327.7	72
	63.9		21.1	42.8	66.6	64
C12 EO 0						
C12 EO2	0.0					
C12 EO4	0.0					
C12 EO8	0.0					
C13 EO 0						
C13 EO2	0.0					
C13 EO4	0.0					
C13 EO8	0.0					
C14 EO 0						
C14 EO2	1.4					
C14 EO4	0.0					
C14 EO8	0.0					
C15 EO 0						
C15 EO2	0.0					
C15 EO4	0.0					
C15 EO8	0.0					
	0.0					

(1) Low recoveries appear to be related to nitrogen blow-down step or degradation of spiking standard. See discussion in Section 2.2.2.

Table 14. LAS and AES Sediment Matrix Spikes (Continued)

	BRYAN MATRIX SPIKE	BRYAN, OH - UPSTREAM CENTRIFUGED SEDIMENT - U SEDIMENT (SIDE STREAM COMPOSITE)				
Sequence #						
File name	35.0	29				
Lab ID	3J31Q035	3J31Q029				
Sample weight (g)	B-13-S Bryon Sediment QC-MS-LAS (CENT SED U)	B-7-S Bryon Cent Sediment-U		NET CONC'N (ng/g)	THEORETICAL CONC'N (ng/g)	RECOVERY (%)
Concentration, ng/g	17.1	20.118				
C10 LAS						
C11 LAS	843.3		24.4	818.9	768.8	107
C12 LAS	2226.6		78.4	2148.1	2023.4	106
C13 LAS	2050.2		133.9	1916.3	2015.0	95
C14 LAS	332.8		87.7	245.1	327.7	75
	49.9		20.5	29.3	66.6	44
C12 EO 0						
C12 EO2	0.8					
C12 EO4	0.0					
C12 EO8	0.2					
C13 EO 0						
C13 EO2	0.0					
C13 EO4	0.3					
C13 EO8	0.0					
C14 EO 0						
C14 EO2	0.0					
C14 EO4	0.0					
C14 EO8	0.0					
C15 EO 0						
C15 EO2	0.0					
C15 EO4	0.0					
C15 EO8	0.0					
	0.0					

(1) Low recoveries appear to be related to nitrogen blow-down step or degradation of spiking standard. See discussion in Section 2.2.2.

Table 14. LAS and AES Sediment Matrix Spikes (Continued)

	BRYAN MATRIX SPIKE	BRYAN, OH - UPSTREAM CENTRIFUGED SEDIMENT - U SEDIMENT (SIDE STREAM COMPOSITE)				
Sequence #	37.0	29				
File name	3J31Q037	3J31Q029				
Lab ID	B-15-S Bryon Sediment QC-MS-AE/AES (CENT SED U)	B-7-S Bryon Cent Sediment-U				
Sample weight (g)		20.118				
Concentration, ng/g	16.7		24.4			
C10 LAS	120.1		78.4			
C11 LAS	254.6		133.9	NET CONC'N (ng/g)	THEORETICAL CONC'N (ng/g)	RECOVERY (1) (%)
C12 LAS	352.0		87.7			
C13 LAS	186.4		20.5			
C14 LAS	22.7					
C12 EO 0	32.8		1.0	31.8	73.3	43
C12 EO2	15.0		0.0	15.0	42.1	36
C12 EO4	4.3		0.2	4.1	16.1	26
C12 EO8						
C13 EO 0	30.3		0.0	30.3	78.4	39
C13 EO2	8.6		0.0	8.6	31.7	27
C13 EO4	8.2		0.0	8.2	30.9	26
C13 EO8						
C14 EO 0	22.8		0.0	22.8	56.1	41
C14 EO2	5.3		0.0	5.3	22.3	24
C14 EO4	2.2		0.1	2.1	11.6	18
C14 EO8						
C15 EO 0	11.2		0.4	10.9	45.6	24
C15 EO2	2.6		0.0	2.6	18.4	14
C15 EO4	0.8		0.0	0.8	7.2	12
C15 EO8	0.3		0.0	0.3	3.3	10

(1) Low recoveries appear to be related to nitrogen blow-down step or degradation of spiking standard. See discussion in Section 2.2.2.

Table 15. Boron Sample and QC Results

SAMPLE RESULTS

SITE	SAMPLE CODE	BORON CONC'N FOUND (ug/L)
LOWELL, IN - HOTEL WATER	FIELD BLANK - B	ND <100
LOWELL, IN - UPSTREAM	SURF WATER - U	117
LOWELL, IN - RAW INFLUENT	STP INFLUENT - R	604
LOWELL, IN - EFFLUENT	STP EFFLUENT - E	590
LOWELL, IN - DISCHARGE	SURF WATER - D	334
LOWELL, IN - END OF MIXING	SURF WATER - M	481
LOWELL, IN - END OF MIXING - DUP	SURF WATER - M - DUP	498
LOWELL, IN - FAR DOWNSTREAM	SURF WATER - F	327
WILMINGTON, OH - UPSTREAM	SURF WATER - U	ND<100
WILMINGTON, OH - RAW INFLUENT	STP INFLUENT - R	608
WILMINGTON, OH - EFFLUENT	STP EFFLUENT - E	523
WILMINGTON, OH - END OF MIXING	SURF WATER - M	221
WILMINGTON, OH - DOWNSTREAM	SURF WATER - D	183
WILMINGTON, OH - FAR DOWNSTREAM	SURF WATER - F	153
BRYAN, OH - UPSTREAM	SURF WATER - U	103
BRYAN, OH - RAW INFLUENT	STP INFLUENT - R	288
BRYAN, OH - EFFLUENT	STP EFFLUENT - E	279
BRYAN, OH - END OF MIXING	SURF WATER - M	204
BRYAN, OH - DOWNSTREAM	SURF WATER - D	209
BRYAN, OH - FAR DOWNSTREAM	SURF WATER - F	189

QUALITY CONTROL RESULTS

SITE - SAMPLE ID	SAMPLE DESCRIPTION	SPIKED CONC'N (ug/L)	RESULT
NA	METHOD BLANK	0	ND<100
NA	LAB CONTROL SPIKE	1000	97% RECOVERY
LOWELL, IN - DISCHARGE (SURF WATER -D)	SAMPLE MATRIX SPIKE	1000	97% RECOVERY
LOWELL, IN - DISCHARGE (SURF WATER -D)	MATRIX SPIKE DUPLICATE	1000	97% RECOVERY
		AVERAGE RECOVERY =	97%
		FOUND (ug/L)	
LOWELL, IN - END OF MIXING	FIELD DUPLICATE	481	
LOWELL, IN - END OF MIXING - DUP	FIELD DUPLICATE	498	
		AVERAGE FOUND =	490 ug/L
		RANGE (+/-) =	9 ug/L

Note: "ND" = Not detected at or above reporting limit (i.e., lowest standard).

Table 16. QC Measurements, Objectives, and Results

QC measurement	QC objective	QC results
Decontamination of all glassware per AE validation report, with the addition of an acid rinse for LAS and AS/AES glassware.	Preventative measures to reduce or eliminate laboratory surfactant background levels.	With few exceptions, method blanks were demonstrated to be below reporting limits for all methods.
One method blank (reagents only) for each sample set to measure laboratory background.	Method blanks below reporting limits.	With few exceptions, method blanks were demonstrated to be below reporting limits for all methods.
Reagent spiked samples for the aqueous water sample sets will consist of surfactants spiked into Milli-Q® reagent water and extracted with the test samples to demonstrate recovery and method performance in the absence of matrix effects. Spike levels will be at 10X the estimated residual concentrations of the samples.	30% to 150% Recovery.	Average recoveries for AE were within objectives, with the exception of some chemicals that were spiked at lower concentrations (e.g., < 10 ng/L). LAS recoveries met this objective, but AS/AES recoveries did not meet this objective. Low recoveries for AES may be attributed to the presence of trace amounts of methanol in the spiking solution, loss due to evaporation during final preparation, or possibly degradation of the standard solution used to spike the QC samples.
Reagent spiked samples for the sediment sample sets will consist of surfactant spiked organic extraction solvent (Fraction 1, acetonitrile, for AE study or methanol for the other surfactants) for measurement of recovery without matrix effects.	50% to 150% Recovery.	Average AE recovery was slightly below this objective at 44%. LAS recoveries met this objective, but AES recoveries were below this objective (~ 9% to 30% of theory). Low AES recoveries may be attributed to reasons discussed above.
Spiked sediment samples will be prepared to measure recovery of surfactants from actual samples. Spike levels will be at 10X the estimated residual concentrations of the samples.	30% to 150% Recovery.	AE spiked sediment generally met this objective when spiked at > 10 times residual concentrations. AES spiked sediments were generally below this objective, possibly due to reasons discussed above. LAS spiked sediments were near 100% recovered.
Duplicate analysis of each sediment sample to measure precision and reproducibility.	30% relative percent difference.	In general, precision of both aqueous and sediment samples that were analyzed in duplicate met this objective.
Minimum of 4-point calibration curves for AE (as combined formulated standard fortified with additional alcohols), LAS formulated product, and AS/AES formulated product to establish linearity of response.	Correlation coefficient of 0.99 or better. Average calibration response factor ≤ 30% relative standard deviation.	Correlation coefficients were better than 0.99 for all chemicals using 5-point standard curves. With some exceptions, precision of relative response factors were < 30% RSD. Continuing calibration standards were run after approximately every 10 samples to monitor instrument performance. A verification standard was analyzed to validate the calibration curves.