Year 1 (2005) Monitoring Report
Middle Waterway Problem Area C
Sediment Management Units 51a and 51b
Commencement Bay Nearshore/
Tideflats Superfund Site
Tacoma, Washington

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CONTENTS

Page

1.0 INTRODUCTION 1

1.1 Remedial Action Summary 1
1.2 Monitoring Objectives and Scope 2
1.3 Year 1 Monitoring Activities 2
1.4 Performance Standards 3
1.5 Elements of the Year 1 Monitoring Report 3

2.0 RESULTS OF PHYSICAL MONITORING 3

2.1 Visual Inspection 4

3.0 SEDIMENT CHEMICAL QUALITY MONITORING 8

3.1 Chemical Analyses Results 9
3.2 Data Quality Review 13
3.3 Recommended Supplemental Sampling in SMU 51b 16

4.0 REFERENCES 17

TABLES

1 Outfall Channel Survey Elevation Data
2 Grade Stake Survey Elevation Data
3 Commencement Bay Sediment Quality Objectives (SQOs)
4 Analytical Results for Year 1 Sediment Samples – Metals
5 Analytical Results for Year 1 Sediment Samples – Organochlorine Pesticides and Polychlorinated Biphenyls (PCBs)
6 Analytical Results for Year 1 Sediment Samples – Semivolatile Organic Compounds (SVOCs)
7 Analytical Results for Year 1 Sediment Samples – Volatile Organic Compounds (VOCs)

CONTENTS (Continued)

Page

FIGURES

1 Vicinity Map
2 Site Plan
3 Long-Term Grade Monitoring Location Plan and Stabilized Erosion Areas (SMU 51a)
4 Year 1 Surface Sediment Sampling Grids and Photograph Location Plan (SMU 51a)
5 Excavated Areas with Visibly Contaminated Sediments (SMU 51a)
6 Year 1 Surface Sediment Sampling Grids and Photograph Location Plan (SMU 51b)

APPENDIX A
YEAR 1 PHOTOGRAPHS

APPENDIX B
CERTIFICATES OF ANALYSIS
ANALYTICAL RESOURCES INCORPORATED

APPENDIX C
YEAR 0 BASELINE SEDIMENT SAMPLING ANALYSIS SUMMARY

APPENDIX D
HABITAT MONITORING REPORT – YEAR 1
MANAGEMENT OF ENVIRONMENTAL RESOURCES, INC.

YEAR 1 (2005) MONITORING REPORT
MIDDLE WATERWAY PROBLEM AREA C
SEDIMENT MANAGEMENT UNITS 51a AND 51b
COMMENCEMENT BAY NEARSHORE/TIDEFLATS SUPERFUND SITE
TACOMA, WASHINGTON

1.0 INTRODUCTION

This report presents results of Year 1 (2005) post-construction monitoring for the Remedial Action completed at Middle Waterway Area C. A Vicinity Map and Site Plan for the Middle Waterway Area C are presented on Figures 1 and 2, respectively. The Remedial Action for Area C was completed between July and October 2004 by the Washington Department of Natural Resources (DNR). The Remedial Action removed and backfill and/or capped contaminated intertidal sediment near the head of the waterway. Post-construction monitoring is being completed to assess the performance of sediment backfilling and capping, and to ensure that long-term performance objectives are met. Monitoring activities for the Year 1 event were completed in accordance with the project Operations, Maintenance, and Monitoring Plan (OMMP, Hart Crowser 2005b).

The OMMP and Year 1 monitoring comply with the conditions and requirements of the Remedial Design/Remedial Action (RD/RA) Consent Decree (Civil Action No. CO3-5331 (RJB) FDB), dated August 14, 2003, U.S. Environmental Protection Agency (EPA 2003b). The Consent Decree was issued by the EPA to the DNR, City of Tacoma (City), and other parties. The OMMP and Year 1 monitoring also address requirements of EPA's Statement of Work (SOW)-Remedial Design, Remedial Action, and Long-Term Monitoring, dated April 10, 2003 (EPA 2003a).

1.1 Remedial Action Summary

The Remedial Action included sediment management units (SMUs) 51a and 51b of Middle Waterway Problem Area C (Figure 2). These SMUs were contaminated with metals and heavy-end organic constituents from historical waste disposal and industrial activities. Remedial activities involved excavation of more than 3,125 cubic yards of contaminated sediment from SMU 51a and backfilling of the SMU 51a excavation areas. In SMU 51b, a thin-layer cap was placed as a measure to enhance natural attenuation. In addition to removing and capping a substantial volume of contaminated sediments, the Remedial Action restored intertidal habitat to restore one of the last original tideflats in Commencement Bay. Additional project details are described in the Remedial Action Construction Report (RACR, Hart Crowser 2005a).

1.2 Monitoring Objectives and Scope

The overall objective of post-construction monitoring is to confirm that the Remedial Action is achieving the project performance objectives listed in the Consent Decree and SOW. These objectives include confirmation that:

- Performance standards are achieved throughout the area of the Remedial Action;
- Exposure of potential contaminants has not occurred through physical processes; and
- Natural recovery in SMU 51b has occurred within 10 years following completion of construction for the Remedial Action.

In addition, results of Year 1 sediment sample testing were assessed to further corroborate analytical testing results from the Year 0 (2004) sampling following construction. Additional details for Year 0 monitoring are presented in a separate report.

Monitoring is targeted for a minimum of 5 years following completion of construction in 2004. The need for potential additional monitoring will be evaluated following the Year 5 (2009) monitoring event, with revisions made to the monitoring strategy, as necessary. The frequency and years for long-term monitoring coincide with additional monitoring for Middle Waterway Area A and Area B being conducted by others.

1.3 Year 1 Monitoring Activities

As for monitoring for the Year 0 baseline event, monitoring for Year 1 included:

- Sampling and chemical testing of surface sediments (0 to 10 centimeters [cm]) at selected locations in SMU 51a and SMU 51b;
- Documentation of the physical characteristics of the restored tideflat to evaluate potential erosion, sediment deposition, and the extent of intermixing with underlying sediments; and
- Ensuring that the backfill function and thickness are not compromised where minor residual contamination remains at the base of the backfilled excavation in the central portion of SMU 51a (described below).

Monitoring also included documentation of upland and tideflat habitat conditions following restoration efforts completed through the spring of 2005. These activities are conducted separately from the CERCLA requirements for the project, but are included in Appendix D of this monitoring report for documentation purposes, and to provide continuity with other monitoring activities. Recolonization and recruitment of benthic organisms on the restored tideflat surface demonstrate the overall success of capping and backfilling as a key objective of the SOW. Intertidal and upland replanting efforts are also helping to maintain the overall physical stability and integrity of the SMU 51a backfill. It should be noted that EPA's review and approval of this Year 1 Baseline Monitoring Report does not include the habitat restoration component.

1.4 Performance Standards

Performance standards for chemical and physical monitoring are described in the OMMP. Chemical performance standards are applicable to both SMU 51a and SMU 51b, while physical performance standards are applicable to areas of SMU 51a where sand backfill overlies residual contamination. Applicable performance standards for Year 1 monitoring activities are presented in text discussions below.

1.5 Elements of the Year 1 Monitoring Report

The remainder of this report contains the following sections:

- Section 2.0 Results of Physical Monitoring;
- Section 3.0 Sediment Chemical Quality Monitoring;
- Section 4.0 Data Quality Review; and
- Section 5.0 References.

Appendix A presents photographs from the Year 1 field activities. Appendix B presents laboratory analytical documentation for Year 1 samples. For comparative purposes, Appendix C presents analytical results from the Year 0 baseline sampling. Results of habitat monitoring for Year 1 are presented in Appendix D.

2.0 RESULTS OF PHYSICAL MONITORING

Physical monitoring for Year 1 was completed between August 15 and 17, 2005. The work coincided with collection of surface sediment samples for chemical analysis (see Section 3.0). Additional observations were made during a second site visit by Hart Crowser on October 3, 2005. Physical monitoring included

visual inspections and elevation surveys as described below. Monitoring was conducted during low tide periods when the tideflat was exposed. Locations of referenced photographs are identified on Figures 4 and 6.

2.1 Visual Inspection

Visual inspection included observations of the physical appearance and integrity of the restored tideflat surface in SMU 51a and SMU 51b. Additional specific observations were made at locations where surface sediment samples were collected.

General Appearance

The near-surface backfill in SMU 51a and capping material in SMU 51b were no longer easily distinguishable from the surrounding tideflat sediments, as they had been during the Year 0 Baseline inspection in October 2004 (Photograph 1). The backfill and capping materials have blended with the surrounding tideflat and the surface has become more even.

As expected, small localized depression pockets (less than about 6 inches deep) noted during Year 0 monitoring have continued to blend and disappear. These small pockets were most prevalent near remnant wooden piling in SMU 51b. A shallow depression of approximately 1,000 square feet also formed following capping in the southern part of SMU 51b. This depression formed during placement and/or settling of the surficial backfill in a low-relief part of the tideflat. This low-relief area was present prior to conducting the Remedial Action and may have promoted formation of the shallow depression and associated ponding on the post-backfill surface. Drainage channels have continued to develop from the depression and limit the amount of ponded water during low tide.

Other areas of SMU 51a and SMU 51b have continued to smooth and form even surfaces transitional to the mudflat tidal channels. The brown algal layer noted in the fall of 2004 and spring of 2005 was present as a thin layer of green fine, hair-like algae tending to form thin mats that trap fine silts This algal material is underlain by a thin layer of fine black silt and sand demarking an anoxic zone just above the brown backfill or cap (Photographs 2 and 3).

An abundance of small holes up to several millimeters in diameter were also present throughout the cap and backfill as a result of burrows from near-surface biological recruitment, as illustrated in Photograph 4 and described further in the Appendix D habitat monitoring report. Larger burrows up to about 2 to 3 centimeters in diameter were also present at locations along the edges of

shallow drainage channels in SMU 51b (Figure 6). These burrows may be indicative of the presence of Ghost Shrimp and will continue to be monitored. As discussed below, these features are not expected to affect the performance of the thin-layer cap.

Surficial Sediment Thickness and Composition

Material placed for surficial backfill in SMU 51a and thin-layer capping in SMU 51b consisted of brown silty sand and sandy silt. The depth to the interface with underlying backfill in SMU 51a and native sediments in SMU 51b varied from about 6 to 12 inches, consistent with the original placement thicknesses. There was no indication that the surficial backfilling or capping layers had been compromised by erosion or subsidence.

A distinct, sharp interface remains between the surficial backfill and capping material and the underlying sediments. This is not unexpected during the first post-construction year, although turbation from benthic organisms is expected to blend the interface over time. Worm tubes and other burrows appear even more abundant in the surficial material than during the previous year's monitoring (Photograph 4). This includes the areas of suspected Ghost Shrimp burrows described above and identified on Figure 6. Biological features are described in more detail in the Appendix D habitat monitoring report.

Erosion Features

Minor erosion features that were noted following construction and in the winter and spring of 2005 have stabilized, with no indication of continued down cutting or back cutting. These features were generally limited to:

- Upland bank erosion at the southeastern edge of SMU 51a from wave undercutting;
- Gullying near Outfall No. 200; and
- Very minor sideslope erosion previously noted on the eastern bank of the upper portion of the outfall discharge channel.

These features are identified on Figure 3 and described below. Little erosion has been observed throughout the remaining tideflat areas of SMUs 51a and 51b. It should be stressed that the sediment sampling locations were not in the areas of minor erosion, nor were the sampling locations affected by erosion in any way. No erosion was noted in capped areas of SMU 51b or where minor residual

contamination remains in and adjacent to SMU 51a, as described in the RACR (Hart Crowser 2005a) and in Section 3.1, below.

SMU 51a Upland Bank Erosion from Wave Undercutting

Wave undercutting of the upland bank at the southeastern boundary of the SMU 51a was observed following several storm cycles between December 2004 and February 2005. A number of the shrubs and trees along the bank were partially washed out or were in danger of being washed out. These shrubs and trees were replanted on March 7, 2005, and jute mats were installed in May 2005 (Figure 3 and Photograph 5). The shrubs and trees were generally replanted within about 10 feet of their original locations. Although bank undercutting occurred prior to placement of the jute mats, it is uncertain whether earlier placement of the jute mats would have provided sufficient protection to prevent undercutting. The undercutting that occurred was limited to the new backfill placed along the shoreline with minor additional undercutting of the remaining bank. No additional erosion was noted during Year 1 visual monitoring and the bank slope appeared stable. The current bank slope and condition are similar to the pre-construction bank condition.

Response. No additional actions are deemed necessary, other than visual inspection planned for subsequent monitoring events.

Gullying near Outfall No. 200

Gully features up to 1 foot wide and 1 foot deep near the outfall have stabilized and become partially vegetated over the last year as upland plantings (and invasive species) have propagated. Also, a curb was installed in December 2004 near the East 11th Street edge of the upland area to retain runoff and prevent additional erosion (Figure 2 and Photograph 6).

Response. No additional actions are deemed necessary, other than visual inspection planned for subsequent monitoring events.

Outfall Channel Erosion

Minor erosion features formed on the eastern side slope of the outfall channel shortly after the completion of backfilling in October 2004 (Figure 3). These features stabilized and adjusted with tidal exchange, and were no longer visible as of May 2005 (Photograph 7 and Photograph 8). No other erosion features of this type were noted in this area, implying that the channel is stable and erosion had no affect on the physical performance of the channel or SMU 51a backfill. As noted above, the shallow side channel and bank gullies were not in areas of

sediment sampling, nor did they adversely affect the thickness of backfill material in SMU 51a.

Response. No additional actions are deemed necessary, other than visual inspection planned for subsequent monitoring events.

A channel invert elevation survey was conducted in September 2005 for comparison with post-construction elevations in September 2004. Results are presented in Table 1. The maximum change between 2004 and 2005 was a 0.25-foot increase at one location. This location was about 163 feet downstream of the outfall. Elevation differences at many other locations generally were less than 0.1 foot, indicating no significant erosion or accretion. The maximum elevation loss noted between 2004 and 2005 was 0.15 feet at a point located 40 feet downstream of the outfall. These variations are well within the performance criteria of 0.5 foot of downcutting as an early warning level, and 1.0 foot as a potential response action.

The September 2005 survey indicated that virtually no lateral migration of the outfall channel has occurred over much of its length since October 2004. However, the lowermost 50 feet have experienced minor lateral movement of less than about 4 feet at one location (about 220 feet downstream of the outfall). The comparative early warning and potential response action levels are movements of greater than 2 and 4 feet, respectively. The project design and OMMP anticipated that some degree of lateral channel migration is expected, and this condition does not indicate that the integrity of the backfill in SMU 51a has been compromised.

Response. Given the overall visible stability of the channel and absence of apparent downcutting below the grade of the original channel, no additional actions are deemed necessary, other than visual inspection planned for subsequent monitoring events.

SMU 51a Baseline Grade Stake Survey

In conjunction with the post-construction bathymetric survey and outfall channel invert survey, grade stakes were established at the SMU 51a locations identified on Figure 3 following construction. An elevation survey for grade stakes was completed in September 2005 to compare with baseline readings obtained in October 2004 following construction. Results are presented in Table 2. The maximum change between 2004 and 2005 was a 0.13-foot loss at GS-3. Elevation losses at the other grade stake locations were 0.01 to 0.07 foot, indicating no significant erosion. These variations are well within the

performance criteria of 1.0 foot of backfill loss as an early warning and potential response action level.

Debris

Site visits in August 2005 noted logs, wood, bark and organic matter, and a small amount of litter washed up near the head of SMU 51a and bank areas. At that time a log was lodged in the outfall and was surrounded by Styrofoam, wood, bark, and other debris (Photograph 9). The debris was subsequently removed. The City of Tacoma was contacted to remove debris from the outfall, and no additional blockages have been noted. Debris removal will continue to be coordinated with the City and other parties as necessary.

Abundant bark debris and wrack have accumulated on the upper tideflat area of SMU 51a (Photograph 10). The remnant goose exclusion structure appears to trap debris at low tide and promote accumulation.

Response. Although the debris appears to have no adverse impacts on the channel, outfall, or backfill materials in SMU 51a, the goose exclusion barrier should be removed. Intertidal plantings in this area were not successful, negating the need for the barrier. The intertidal plantings were likely subject to bird foraging and damage from debris sweeping over the area. Establishing additional protection from floating logs and debris would be difficult.

Log structures anchored parallel to the beach face near 9 feet elevation might provide some additional protection from larger debris, but bark and smaller floating material could still be transported into the upper intertidal zone at high tide. Floating boom-type barriers might also be effective but would require further evaluation regarding anchorage and installation, maintenance, potential effects to habitat, and related land-use issues. More aggressive removal of transient logs and wood debris would also help.

3.0 SEDIMENT CHEMICAL QUALITY MONITORING

Year 1 sampling of the backfilled surface of SMU 51a and capped surface of SMU 51b was conducted in August 2005 at the locations shown on Figures 5 and 6, respectively. As discussed in the OMMP, the Year 1 grid was the same as for Year 0 with the exception that discrete samples were collected from several additional grids added to SMU 51a. These grids are identified in Tables 4 through 7 and on Figure 4 as E, F-1, F-2, and J. All samples for the Year 0 event were also analyzed for the standard SQO suite of constituents listed in Table 3, rather than for selected target compounds as was done for the Year 0 event.

The modifications for Year 1 and subsequent sampling and analysis events were made based on analytical results of the Year 0 sampling, and to better represent post-construction conditions. Results from Year 0 sampling are summarized in a separate report.

In total, 21 discrete samples were collected from the upper 10 cm of the tideflat surface by hand during low-tide periods when the tideflat was exposed during the Year 1 event. Sampling included blind field duplicates of SMU 51a sample F-1 and SMU 51b sample M.

Except as noted, sample collection and laboratory chemical analysis conform with procedures described in the EPA-approved Sampling and Analysis Plan (SAP; Foster Wheeler 1998a), and Quality Assurance Project Plan (QAPP; Foster Wheeler 1998b) for the Middle Waterway Problem Area.

Residual Areas of Contaminated Sediment in SMU 51a

Sampling for both Year 0 and Year 1 included areas where a visibly contaminated sediment layer was encountered and completely removed within the boundaries of SMU 51a (Figure 5). In the affected area near the central part of the SMU 51a, some of the residual contaminated material was unavoidably deposited on the bottom of the excavation during removal of a contaminated sediment layer. The residual material was covered with a minimum 2-foot thickness of sandy backfill and is probably present as a thin, discontinuous film (i.e., less than one-quarter-inch-thick). A contaminated sediment layer also remains on the King Salmon Marine bank, outside of and adjacent to the southwestern edge boundary of SMU 51a. Post-construction sampling and analysis of material from the bottom of the excavation in this area did not detect the presence of residual contamination, however.

3.1 Chemical Analyses Results

Sediment samples from the Year 1 event were submitted to Analytical Resources Incorporated (ARI) for chemical analysis of constituents listed in Table 3. Table 3 presents the Sediment Quality Objectives (SQOs) for the chemicals analyzed. Analytical results of Year 1 samples are presented in Tables 4 through 7. Complete laboratory analytical documentation is presented in Appendix B. For comparative purposes, results of Year 0 laboratory analyses are summarized in Appendix C.

There were no exceedances of SQOs or one-half SQO values. With the exception of hexachlorobenzene, 2,4-dimethylphenol, hexachlorobutadiene, and nitrosodiphenylamine, laboratory reporting limits for undetected constituents

were less than one-half their respective SQOs. The detection limits for the listed compounds were unavoidably elevated above the one-half SQO limit. Hexachlorobenzene and hexachlorobutadiene were also included as analytes for the pesticide analyses, with no detections. Detection limits for the latter analyses were well below one-half of SQOs for these two compounds.

The Year 1 data confirm the SMU 51a backfill and SMU 51b thin-layer capping are performing as anticipated. There is no indication of release or migration of chemical constituents associated with remedial actions in Area C. These results also further corroborate similar findings of Year 0 sediment baseline sampling and analysis, as presented in a separate report.

Results for Year 1 analytical testing are further summarized below.

Metals

Detected metals included chromium, copper, lead, mercury, nickel, and zinc (Table 4). The detected concentrations were generally comparable to, or below typical background concentrations for naturally occurring soils. All detected concentrations were below one-half applicable SQOs. Arsenic, cadmium, and silver were not detected above their respective analytical detection limits.

Polychlorinated Biphenyls (PCBs) and Pesticides

As shown in Table 5, no PCBs or pesticides were detected above their respective analytical detection limits. These detection limits are well below one-half applicable SQOs.

Semivolatile Organic Compounds (SVOCs)

As shown in Table 6, detected constituents were limited to low- and high-molecular weight polycyclic aromatic hydrocarbons (LPAHs and HPAHs), diethylphthalate and dimethylphthalate, and phenol. All detected concentrations were generally well below one-half of their respective SQOs. No chlorinated hydrocarbons or miscellaneous extractables were detected above their applicable analytical detection limits.

LPAHs and HPAHs

LPAHs were detected in four samples, with concentrations of total LPAHs ranging from 31 to 37 micrograms per milligram (ug/kg). Except in one sample, HPAHs were detected with total HPAH concentrations generally ranging from 19 to 297 ug/kg. The detected concentrations of individual LPAH and HPAH

compounds are consistent with expected contributions from background sources affecting the water column. Low-level PAH concentrations related to background anthropogenic sources are ubiquitous in the environment and well established by many studies. It is not surprising that PAH concentrations at these levels would be detected in the Middle Waterway environment, given the industrial setting of Commencement Bay. Low-level LPAH and HPAH detections could also be related to background contributions from import surficial backfilling and capping materials. Although PAHs were not detected in samples of the sand component of the import backfill and capping materials, the analytical reporting limits for individual LPAH and HPAH compounds were 21 ug/kg, except for benzofluoranthenes which was 41 ug/kg. These reporting limits are in the range of many of the detected concentrations from the Year 1 samples.

Based on the concentrations and distribution of PAHs detected during post-construction monitoring, we believe that is unlikely that the PAH detections indicate an upland source, at least near Area C. If for example, additional PAH input was occurring from the stormwater outfall at the head of the waterway, a consistent pattern of PAH detections would be expected in the surface samples from this area. There is no indication of increasing PAH concentrations toward the outfall or other patterns that would indicate an upstream source. Results from future Area C sample analyses will continue to be evaluated for indications of potential recontamination from all sources, including local stormwater and possible upland sources.

Duplicate sample MD-M-2005 from the SMU 51b thin-layer cap contained a total HPAH concentration of 2,472 ug/kg. This sample is a field duplicate of sample M-M-2005 that contained a total HPAH concentration of 23 ug/kg. The detected LPAH and HPAH concentrations were well below one-half of their respective SQOs. It is further suspected that the HPAH concentration of 2,472 ug/kg detected in sample MD-M-2005 may have been affected by waterborne-particulate matter, although no visible material was observed during sampling. As a field duplicate, this sample illustrates the significant variability of sample analytical results, given the 23 ug/kg concentration detected in sample M-M-2005 at the same location. Both samples were collected from the same sediment that was thoroughly mixed in a stainless steel bowl before transferring to samples jars. If during future sampling events either the original or duplicate sample exceeds an SQO (but the other does note), the sample will be rehomogenized and reanalyzed for the COC(s) in question. A supplement/errata page with this protocol will also be issued for the OMMP

It should be further noted that none of the samples, including M-M-2005 and MD-M-2005, were collected in areas affected by suspected Ghost Shrimp

burrows in SMU 51b (see Figure 6). Additional sampling and analysis is recommended in the future to target such areas, as described below in Section 3.3.

Phthalates

Diethylphthalate and dimethylphthalate were detected in two samples at concentrations of 30 and 57 ug/mg, respectively. These concentrations are well below one-half of their respective SQOs, and are somewhat ubiquitous in the environment from background sources.

Phenol

Phenol was detected in one sample at a near-detection limit concentration of 20 ug/kg. This concentration is well below one-half of the SQO, and can be somewhat ubiquitous in the environment from background sources. Phenol was not detected in any other sample.

Volatile Organic Compounds (VOCs)

As shown in Table 7, acetone and methylene chloride were detected at concentrations up to 20 and 4.7 ug/kg, respectively, in several samples. These concentrations are indicative of the presence of these compounds as common laboratory contaminants. Tetrachloroethene was detected at a concentration of 3.8 ug/kg in sample O-M-2005, and m, p-xylenes were detected at a concentration of 1.2 ug/kg in sample MD-M-2005 (duplicate of sample M-M-2005). These compounds were not detected in any other samples during Year 1.

Similar to the discussion of low-level detections of PAHs, the detections of tetrachloroethene and xylenes each at a single, separate SMU 51b location suggest these constituents are waterborne from ambient background sources originating elsewhere in the waterway and/or Commencement Bay. The limited occurrence and suspected external source of these compounds demonstrates that there is no connection to the performance of the SMU 51b thin layer cap. Tetrachloroethene was not detected during Year 0 sampling, and the location of the lone xylene detection in Year 0 was in SMU 51a (at an estimated concentration of 1.2 ug/kg at or near the analytical detection limit). Therefore the Year 0 detections of tetrachloroethene and xylenes have no spatial relation to the detections of these compounds during Year 1 – further pointing to contributions from ambient external sources. Future VOC sampling results and patterns of detections will continue to be evaluated to determine potential sources and contributions.

3.2 Data Quality Review

The sediment samples for the project, including two field duplicates and a rinseate blank were analyzed by Analytical Resources, Inc. (ARI) of Tukwila, Washington. Analytical results were reported as laboratory report number IK93.

Hart Crowser conducted a data quality review of the analytical data to assess whether the data met the specified quality control acceptance criteria for the project. The review is based on quality control requirements described in the project Quality Assurance Project Plan (QAPP) and related EPA guidelines:

- EPA National Functional Guidelines for Organic Data Review (EPA 1999); and
- EPA National Functional Guidelines for Inorganic Data Review (EPA 2004).

Specific quality control objectives are listed in the QAPP and include data validation qualifier flags, field quality control parameters, and laboratory quality control parameters (precision, accuracy, representativeness, comparability, and completeness). The following criteria were evaluated in the standard validation process:

- Holding Times;
- Laboratory Method Blanks;
- Laboratory Control Sample (LCS) Recoveries and Relative Percent Differences (RPDs);
- Matrix Spike (MS) Recoveries and RPDs;
- Laboratory Duplicate RPDs;
- Field Duplicate RPDs;
- Standard Reference Materials; and
- Reported Detection Limits.

The data obtained are of acceptable quality and suitability for their intended use, with the minor qualifications noted below. The laboratory analytical data report is provided in Appendix B.

Total Metals

Samples were extracted and analyzed within holding times specified in the SAP. Zinc was detected in one of the method blanks analyzed. As zinc concentrations in the samples were greater than 10 times the concentration detected in the method blank, no action was taken. Analytes were not detected in the rinse blank.

Analysis of a standard reference material had metal concentrations measured within the laboratory advisory limits. MS/MSD recoveries were within the QAPP control limits, with the exception of antimony that had recoveries below the lower control limit of 75 percent. Antimony was not detected in the samples, and the non-detects were qualified as estimated (UJ) because of the low MS recoveries. The RPDs between laboratory duplicate measurements were within the QAPP and laboratory control limits.

Field duplicate analysis had RPDs less than 50 percent as specified in the QAPP, with the exception of chromium in one of the field duplicate pairs that had an RPD of 94 percent. No action was taken, but this result does indicate some heterogeneity within the samples.

PCBs

Samples were extracted and analyzed within holding times specified in the SAP. Analytes were not detected in the method blanks analyzed or the rinse blank.

Surrogate recoveries were all within the QAPP and laboratory control limits. MS/MSD recoveries were within the QAPP control limits. MS/MSD RPDs were acceptable. LCS recoveries were within QAPP control limits. One continuing calibration analysis had quality control limits for Aroclor 1016 exceeded; however, as Aroclor 1016 was not detected in the samples, no action was taken.

Field duplicate analysis showed all results as non-detect and the RPD calculation was not applicable.

SVOCs

Twelve of the samples were extracted one day past the holding time of 10 days that was incorrectly specified in the SAP. USEPA contract laboratory guidelines

specify 14 days until extraction, rather than the 10 days as listed in the SAP, and no action was taken. Some of the samples were initially analyzed as a dilution because of their dark appearance. When low concentrations of analytes or no detections were observed in the diluted the samples, the samples were reanalyzed without dilutions. Both analyses met holding times and results from the undiluted samples were reported, unless specified otherwise.

Di-n-butylphthalate and bis(2-ethylhexyl)phthalate were detected in one or more of the laboratory method blanks. For these common phthalate contaminants, any detections in the samples were qualified as non-detected (U) if the sample concentration was less than 10 times the method blank concentration. Analytes, with the exception of di-n-butylphthalate, were not detected in the initial analysis of the rinse blank. Di-n-butylphthalate was qualified as non-detect in the rinse blank due to method blank contamination.

Surrogate recoveries were within the QAPP control limits, with the exception of one surrogate in samples O-M-2005 and L-M-2005. As all other surrogate recoveries were within the QAPP control limits and as the surrogate recoveries all met the laboratory specified control limits, no action was taken.

MS/MSD recoveries were within the QAPP control limits. MS/MSD RPDs were acceptable.

LCS/LCSD recoveries were within QAPP control limits. LCS/LCSD RPDs were acceptable, with the exception of 4-nitrophenol, which slightly exceeded the RPD limit in the QAPP. As the MS/MSD RPD for 4-nitrophenol was within the control limits and as the exceedance was minor, no action was taken. The LCS/LCSD analysis for the rinse blank sample had 4-nitrophenol recoveries in both the LCS and LCSD below the QAPP recovery limits. Thus, the undetected 4-nitrophenol result in the rinse blank was qualified as estimated (J).

The internal standard d-12-perylene was outside the laboratory control limits for eight of the undiluted samples analyzed. For these samples, detections of analytes associated with this internal standard, including benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perlyene, benzo(a)pyrene, and dibenz(a,h)anthracene, were qualified as estimated (J). In the cases where these analytes were detected in the diluted samples as well, the diluted results were reported, as these diluted results were not estimated values.

Field duplicate analysis of one pair of samples had nine analytes with RPDs exceeding 50 percent or with the difference between the samples greater than two times the reporting limit. No action was taken, but this result does indicate heterogeneity within the samples. The second field duplicate sample pair

analyzed had RPDs less than 50 percent as specified in the QAPP or the differences between results were less than 2 times the reporting limit.

VOCs

Samples were analyzed within required holding times. Analytes were not detected in the method blanks analyzed or the rinseate blank.

Surrogate recoveries were within the QAPP and laboratory control limits. LCS/LCSD recoveries were within the QAPP control limits. LCS/LCSD RPDs were acceptable.

Field duplicate analysis had RPDs less than 50 percent as specified in the QAPP or the differences between results were less than 2 times the reporting limit.

Pesticides

Samples were extracted and analyzed within holding times specified in the SAP. Analytes were not detected in the method blanks analyzed or the rinse blank.

Surrogate recoveries were within the QAPP and laboratory control limits. MS/MSD recoveries were within the QAPP control limits. MS/MSD RPDs were acceptable. LCS recoveries were within QAPP control limits. Two continuing calibration standards and the DDT breakdown analysis were outside the control limits on two separate analyses of the samples. The laboratory attributed this to matrix interference. As no DDT, DDD, or DDE was detected in the samples, no action was taken.

Field duplicate analysis showed all results as non-detect and the RPD calculation was not applicable.

3.3 Recommended Supplemental Sampling in SMU 51b

None of the current sediment quality samples were collected in areas affected by suspected Ghost Shrimp burrows, as identified on Figure 6 for SMU 51b. It is recommended that at least two additional samples be collected at locations where burrows are prevalent during the future planned sampling Year 3 (2007) and Year 5 (2009). The location and number of supplemental samples should be determined at the time of sampling based on the distribution and prevalence of suspected Ghost Shrimp burrows.

4.0 REFERENCES

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Table 1 - Outfall Channel Survey Elevation Data

Survey Point Location (Distance Downstream from Outfall in Feet)	Post-Construction Elevation in Feet (October 2004)[a]	Year 1 Elevation in Feet (September 2005)[a]	Elevation Difference in Feet
0	9.5	9.39	-0.11
11	9.0	8.95	-0.05
21	8.3	8.29	-0.01
30	8.1	8.16	0.06
40	8.2	8.05	-0.15
52	8.0	7.99	-0.01
62	7.9	7.83	-0.07
72	7.8	7.87	0.07
83	7.3	7.32	0.02
93	7.1	7.10	0.00
105	7.0	7.03	0.03
115	7.1	7.06	-0.04
126	7.0	6.95	-0.05
136	6.9	6.96	0.06
146	6.9	6.96	0.06
154	6.8	6.85	0.05
163	6.7	6.95	0.25
173	6.6	6.79	0.19
183	See Note b	6.39	Not Calculated
186	See Note b	6.44	Not Calculated
186	See Note b	6.39	Not Calculated
185	See Note b	6.37	Not Calculated
187	See Note b	6.38	Not Calculated
194	See Note b	6.36	Not Calculated
201	See Note b	6.26	Not Calculated
210	See Note b	6.18	Not Calculated

Notes:

a U.S. Army Corps of Engineers Elevation Datum.
Survey data and significant figures as reported by Baseline Engineering, Inc.

b Lower 50 feet of channel migrated relative to 2005 post-construction position. (See Figure 3)
New invert elevations obtained during September 2005 survey.

Table 2 - Grade Stake Survey Elevation Data

Grade Stake Survey No.	Post-Construction Elevation in Feet (October 2004)	Year 1 Elevation in Feet (September 2005)	Elevation Difference in Feet
GS-1	12.15	12.14	-0.01
GS-2	10.18	10.15	-0.03
GS-3	10.50	10.37	-0.13
GS-4	10.39	10.32	-0.07

Table 3 - Commencement Bay Sediment Quality Objectives (SQOs)

Constituents	SQO
Metals in mg/kg	
Antimony	150
Arsenic	57
Cadmium	5.1
Copper	390
Lead	450
Mercury	0.59
Nickel	140
Silver	6.1
Zinc	410
Phenolics (Acids) in ug/kg	
Phenol	420
2-Methylphenol	63
4-Methylphenol	670
2,4-Dimethylphenol	29
Pentachlorophenol	360
Benzyl alcohol	73
Benzoic acid	650
LPAHs in ug/kg	
Naphthalene	2,100
2-Methylnaphthalene	670
Acenaphthylene	1,300
Acenaphthene	500
Fluorene	540
Phenanthrene	1,500
Anthracene	960
Total LPAHs	5,200
HPAHs in ug/kg	
Fluoranthene	2,500
Pyrene	3,300
Benz(a)anthracene	1,600
Chrysene	2,800
Total benzofluoranthenes	3,600
Benzo(a)pyrene	1,600
Indeno(1,2,3-cd)pyrene	690
Dibenz(a,h)anthracene	230
Benzo(g,h,i)perylene	720
Total HPAHs	17,000
Chlorinated Hydrocarbons in ug/kg	
1,3-Dichlorobenzene	170
1,4-Dichlorobenzene	110
1,2-Dichlorobenzene	50
1,2,4-Trichlorobenzene	51
Hexachlorobenzene	22
Phthalates in ug/kg	
Dimethyl phthalate	160
Diethyl phthalate	200
Di-n-butyl phthalate	1,400
Butyl benzyl phthalate	900
Bis(2-ethylhexyl)phthalate	1,300
Di-n-octyl phthalate	6,200

Table 3 - Commencement Bay Sediment Quality Objectives (SQOs)

Constituents	SQO
Misc. Extractables in ug/kg	
Dibenzofuran	540
Hexachlorobutadiene	11
N-Nitrosodiphenylamine	28
Pesticides/PCBs in ug/kg	
Total PCBs	300
4,4'-DDE	9
4,4'-DDD	16
4,4'-DDT	34
VOCs in ug/kg	
Ethylbenzene	10
Tetrachloroethene	57
Total xylenes	40

Table 4 - Analytical Results for Year 1 Sediment Samples - Metals

Sample ID:	SQO	A-2-M-2005	AB-M-2005	B-2-M-2005	CD-M-2005	E-M-2005	F-1-M-2005	FD-1-M-2005
Sampling Date:		8/15/2005	8/17/2005	8/17/2005	8/17/2005	8/17/2005	8/17/2005	8/17/2005
Metals in mg/kg								Dup of F-1-M-2005
Antimony	150	6 UJ	6 UJ	6 UJ	6 UJ	6 UJ	6 UJ	6 UJ
Arsenic	57	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Cadmium	5.1	0.3 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chromium		28.4	31.2	29.4	28.9	28.4	70.6	25.3
Copper	390	17.8	23.9	21	25.4	28.2	26.5	25
Lead	450	6	8	7	9	14	6	7
Mercury	0.59	0.06 U	0.06 U	0.06 U	0.06	0.06	0.05 U	0.06 U
Nickel	140	32	34	33	32	31	33	30
Silver	6.1	0.4 U	0.4 U	0.3 U	0.3 U	0.4 U	0.4 U	0.4 U
Zinc	410	40.8	45.1	44.8	45.4	50.3	46.3	46.7

Sample ID:	SQO	F-2-M-2005	G-M-2005	HI-M-2005	J-M-2005	K-M-2005	L-M-2005	M-M-2005
Sampling Date:		8/17/2005	8/15/2005	8/15/2005	8/15/2005	8/17/2005	8/15/2005	8/15/2005
Metals in mg/kg								
Antimony	150	6 UJ	6 UJ	6 UJ	6 UJ	6 UJ	6 UJ	6 UJ
Arsenic	57	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Cadmium	5.1	0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.2 U	0.2 U
Chromium		29.7	29.2	29.9	29.4	28.7	27.8	46.8
Copper	390	17.8	19.5	16.9	16.4	18.7	21	21.7
Lead	450	6	7	6	6	7	7	6
Mercury	0.59	0.05 U	0.05	0.06 U	0.06 U	0.05 U	0.05	0.06 U
Nickel	140	33	31	33	33	32	30	46
Silver	6.1	0.3 U	0.4 U	0.4 U	0.4 U	0.3 U	0.4 U	0.3 U
Zinc	410	40.5	40.4	39	39.3	44.5	46.5	42.6

Table 4 - Analytical Results for Year 1 Sediment Samples - Metals

Sample ID:	SQO	MD-M-2005	N-M-2005	O-M-2005	P-M-2005	Q-M-2005	R-M-2005	S-M-2005
Sampling Date:		8/15/2005	8/17/2005	8/15/2005	8/15/2005	8/15/2005	8/15/2005	8/15/2005
		Dup of						
Metals in mg/kg		M-M-2005						
Antimony	150	6 UJ	6 UJ	6 UJ	6 UJ	6 UJ	6 UJ	6 UJ
Arsenic	57	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Cadmium	5.1	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.3 U	0.2 U
Chromium		34.1	23.7	25.8	24.1	22	22.2	24.1
Copper	390	20.3	21.2	26.9	26.4	23.6	27.7	24.4
Lead	450	6	5	4	6	5	7	6
Mercury	0.59	0.05 U	0.06 U	0.06	0.06	0.05	0.07	0.06
Nickel	140	36	26	29	26	26	27	27
Silver	6.1	0.4 U	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U
Zinc	410	41.2	41.9	42	45	43.4	45.9	44.4

Notes:
U = Not detected at or above detection limit indicated.
J = Estimated value.
Blank indicates no SQO established.

Table 5 - Analytical Results for Year 1 Sediment Samples - Organochlorine Pesticides and Polychlorinated Biphenyls (PCBs)

Sample ID:	SQO	A-2-M-2005	AB-M-2005	B-2-M-2005	CD-M-2005	E-M-2005	F-1-M-2005	FD-1-M-2005
Sampling Date:		8/15/2005	8/17/2005	8/17/2005	8/17/2005	8/17/2005	8/17/2005	8/17/2005
								Dup of F-1-M-2005
Pesticides in µg/kg								
4,4'-DDE	9	1.9 U	1.9 U	1.9 U	2 U	2.0 U	2 U	2.0 U
4,4'-DDD	16	1.9 U	1.9 U	1.9 U	2 U	2.0 U	2 U	2.0 U
4,4'-DDT	34	1.9 U	1.9 U	1.9 U	2 U	2.0 U	2 U	2.0 U
Hexachlorobenzene	22	0.97 U	0.96 U	0.96 U	0.98 U	0.98 U	0.99 U	0.98 U
Hexachlorobutadiene	11	0.97 U	0.96 U	0.96 U	0.98 U	0.98 U	0.99 U	0.98 U
PCBs in µg/kg								
Aroclor 1016		19 U	19 U	19 U	20 U	20 U	20 U	20 U
Aroclor 1242		19 U	19 U	19 U	20 U	20 U	20 U	20 U
Aroclor 1248		19 U	19 U	29 U	20 U	20 U	20 U	20 U
Aroclor 1254		19 U	19 U	19 U	20 U	20 U	20 U	20 U
Aroclor 1260		19 U	19 U	19 U	20 U	20 U	20 U	20 U
Aroclor 1221		19 U	19 U	19 U	20 U	20 U	20 U	20 U
Aroclor 1232		19 U	19 U	19 U	20 U	20 U	20 U	20 U
Total PCBs	300	19 U	19 U	29 U	20 U	20 U	20 U	20 U

Sample ID:	SQO	F-2-M-2005	G-M-2005	HI-M-2005	J-M-2005	K-M-2005	L-M-2005	M-M-2005
Sampling Date:		8/17/2005	8/15/2005	8/15/2005	8/15/2005	8/17/2005	8/15/2005	8/15/2005
Pesticides in µg/kg								
4,4'-DDE	9	1.9 U	1.9 U	2 U	1.9 U	2.0 U	1.9 U	2.0 U
4,4'-DDD	16	1.9 U	1.9 U	2 U	1.9 U	2.0 U	1.9 U	2.0 U
4,4'-DDT	34	1.9 U	1.9 U	2 U	1.9 U	2.0 U	1.9 U	2.0 U
Hexachlorobenzene	22	0.96 U	0.95 U	0.99 U	0.95 U	0.99 U	0.96 U	0.98 U
Hexachlorobutadiene	11	0.96 U	0.95 U	0.99 U	0.95 U	0.99 U	0.96 U	0.98 U
PCBs in µg/kg								
Aroclor 1016		19 U	19 U	20 U	19 U	20 U	19 U	20 U
Aroclor 1242		19 U	19 U	20 U	19 U	20 U	19 U	20 U
Aroclor 1248		19 U	19 U	20 U	19 U	20 U	19 U	20 U
Aroclor 1254		19 U	19 U	20 U	19 U	20 U	19 U	20 U
Aroclor 1260		19 U	19 U	20 U	19 U	20 U	19 U	20 U
Aroclor 1221		19 U	19 U	20 U	19 U	20 U	19 U	20 U
Aroclor 1232		19 U	19 U	20 U	19 U	20 U	19 U	20 U
Total PCBs	300	19 U	19 U	20 U	19 U	20 U	19 U	20 U

Table 5 - Analytical Results for Year 1 Sediment Samples - Organochlorine Pesticides and Polychlorinated Biphenyls (PCBs)

Sample ID:	SQO	MD-M-2005	N-M-2005	O-M-2005	P-M-2005	Q-M-2005	R-M-2005	S-M-2005
Sampling Date:		8/15/2005	8/17/2005	8/15/2005	8/15/2005	8/15/2005	8/15/2005	8/15/2005
		Dup of M-M-2005						
Pesticides in µg/kg								
4,4'-DDE	9	2 U	2.0 U	1.9 U	1.9 U	2.0 U	1.9 U	1.9 U
4,4'-DDD	16	2 U	2.0 U	1.9 U	1.9 U	2.0 U	1.9 U	1.9 U
4,4'-DDT	34	2 U	2.0 U	1.9 U	1.9 U	2.0 U	1.9 U	1.9 U
Hexachlorobenzene	22	0.98 U	0.97 U	0.96 U	0.95 U	0.98 U	0.97 U	0.95 U
Hexachlorobutadiene	11	0.98 U	0.97 U	0.96 U	0.95 U	0.98 U	0.97 U	0.95 U
PCBs in µg/kg								
Aroclor 1016		20 U	20 U	19 U	19 U	20 U	19 U	19 U
Aroclor 1242		20 U	20 U	19 U	19 U	20 U	19 U	19 U
Aroclor 1248		20 U	20 U	19 U	19 U	20 U	19 U	19 U
Aroclor 1254		20 U	20 U	19 U	19 U	20 U	19 U	19 U
Aroclor 1260		20 U	20 U	19 U	19 U	20 U	19 U	19 U
Aroclor 1221		20 U	20 U	19 U	19 U	20 U	19 U	19 U
Aroclor 1232		20 U	20 U	19 U	19 U	20 U	19 U	19 U
Total PCBs	300	20 U	20 U	19 U	19 U	20 U	19 U	19 U

Notes:
U = Not detected at or above detection limit indicated.
Blank indicates no SQO established.

Table 6 - Analytical Results for Year 1 Sediment Samples - Semivolatile Organic Compounds (SVOCs)

Sample ID:	SQO	A-2-M-2005	AB-M-2005	B-2-M-2005	CD-M-2005	E-M-2005	F-1-M-2005	FD-1-M-2005	F-2-M-2005	G-M-2005	HI-M-2005	J-M-2005	K-M-2005
Sampling Date:		8/15/2005	8/17/2005	8/17/2005	8/17/2005	8/17/2005	8/17/2005	8/17/2005	8/17/2005	8/15/2005	8/15/2005	8/15/2005	8/17/2005
								Dup of F-1-M-2005					
LPAHs in µg/kg													
2-Methylnaphthalene	670	19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
Acenaphthene	500	19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
Acenaphthylene	1300	19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
Anthracene	960	19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
Fluorene	540	19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
Naphthalene	2100	19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
Phenanthrene	1500	19 U	19 U	31	32	35	19 U	20 U	20 U	19 U	20 U	19 U	20 U
Total LPAHs	5200	19 U	19 U	31	32	35	19 U	20 U	20 U	19 U	20 U	19 U	20 U
HPAHs in µg/kg													
Benzo(a)anthracene	1600	19 U	19 U	20	25	24	19 U	20 U	20 U	19 U	20 U	19 U	20 U
Benzo(a)pyrene	1600	23 J	19 U	25	34	32	19 U	28	20 U	19 UJ	20 UJ	19 UJ	20 UJ
Benzo(ghi)perylene	720	19 UJ	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 UJ	20 UJ	19 UJ	20 UJ
Chrysene	2800	19	19 U	30	36	32	19 U	24	20 U	19 U	20 U	19 U	20 U
Dibenz(a,h)anthracene	230	19 UJ	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 UJ	20 UJ	19 UJ	20 UJ
Fluoranthene	2500	30	20	42	68	74	38	41	29	23	22	19 U	20 U
Indeno(1,2,3-cd)pyrene	690	19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
Pyrene	3300	48	28	44	71	73	32	39	25	35	31	19	30
Benzo(b)fluoranthene		19 UJ	19 U	28	40	35	19 U	33	20 U	19 UJ	20 UJ	19 UJ	20 UJ
Benzo(k)fluoranthene		19 UJ	19 U	19 U	23	20	19 U	20 U	20 U	19 UJ	20 UJ	19 UJ	20 UJ
Total Benzofluoranthenes	3600	19 UJ	19 U	28	63	55	19 U	33	20 U	19 UJ	20 UJ	19 UJ	20 UJ
Total HPAHs	17000	120	48	189	297	216	70	165	54	58	53	19	30
Chlorinated Hydrocarbons in µg/kg													
1,2,4-Trichlorobenzene	51	19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
1,2-Dichlorobenzene	50	19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
1,3-Dichlorobenzene	170	19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
1,4-Dichlorobenzene	110	19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
Hexachlorobenzene	22	19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
Phthalates in µg/kg													
Bis(2-Ethylhexyl)Phthalate	1300	39 U	22 U	72 U	70 U	42 U	21 U	20 U	24 U	72 U	20 U	19 U	36 U
Butylbenzylphthalate	900	19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
Diethylphthalate	200	19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
Dimethylphthalate	160	19 U	57	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
Di-n-Butylphthalate	1400	65 U	25 U	30 U	31 U	80 U	27 U	140 U	23 U	19 U	20 U	19 U	41 U
Di-n-Octyl Phthalate	6200	19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
Phenolics (Acids) in µg/kg													
2,4,5-Trichlorophenol		96 U	96 U	96 U	99 U	98 U	97 U	99 U	98 U	95 U	99 U	97 U	98 U
2,4,6-Trichlorophenol		96 U	96 U	96 U	99 U	98 U	97 U	99 U	98 U	95 U	99 U	97 U	98 U
2,4-Dichlorophenol		96 U	96 U	96 U	99 U	98 U	97 U	99 U	98 U	95 U	99 U	97 U	98 U
2,4-Dimethylphenol	29	19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
2,4-Dinitrophenol		190 U	190 U	190 U	200 U	200 U	190 U	200 U	200 U	190 U	200 U	190 U	200 U
2-Chlorophenol		19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
2-Methylphenol	63	19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
2-Nitrophenol		96 U	96 U	96 U	99 U	98 U	97 U	99 U	98 U	95 U	99 U	97 U	98 U
4,6-Dinitro-2-Methylphenol		190 U	190 U	190 U	200 U	200 U	190 U	200 U	200 U	190 U	200 U	190 U	200 U
4-Chloro-3-Methylphenol		96 U	96 U	96 U	99 U	98 U	97 U	99 U	98 U	95 U	99 U	97 U	98 U

Table 6 - Analytical Results for Year 1 Sediment Samples - Semivolatile Organic Compounds (SVOCs)

Sample ID:	SQO	A-2-M-2005	AB-M-2005	B-2-M-2005	CD-M-2005	E-M-2005	F-1-M-2005	FD-1-M-2005	F-2-M-2005	G-M-2005	HI-M-2005	J-M-2005	K-M-2005
Sampling Date:		8/15/2005	8/17/2005	8/17/2005	8/17/2005	8/17/2005	8/17/2005	8/17/2005	8/17/2005	8/15/2005	8/15/2005	8/15/2005	8/17/2005
								Dup of F-1-M-2005					
4-Methylphenol	670	19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
4-Nitrophenol		96 U	96 U	96 U	99 U	98 U	97 U	99 U	98 U	95 U	99 U	97 U	98 U
Benzoic Acid	650	190 U	190 U	190 U	200 U	200 U	190 U	200 U	200 U	190 U	200 U	190 U	200 U
Benzyl Alcohol	73	19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
Pentachlorophenol	360	96 U	96 U	96 U	99 U	98 U	97 U	99 U	98 U	95 U	99 U	97 U	98 U
Phenol	420	19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
Misc. Extractables in µg/kg													
2,2'-Oxybis(1-Chloropropane)		19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
2,4-Dinitrotoluene		96 U	96 U	96 U	99 U	98 U	97 U	99 U	98 U	95 U	99 U	97 U	98 U
2,6-Dinitrotoluene		96 U	96 U	96 U	99 U	98 U	97 U	99 U	98 U	95 U	99 U	97 U	98 U
2-Chloronaphthalene		19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
2-Nitroaniline		96 U	96 U	96 U	99 U	98 U	97 U	99 U	98 U	95 U	99 U	97 U	98 U
3,3'-Dichlorobenzidine		96 U	96 U	96 U	99 U	98 U	97 U	99 U	98 U	95 U	99 U	97 U	98 U
3-Nitroaniline		96 U	96 U	96 U	99 U	98 U	97 U	99 U	98 U	95 U	99 U	97 U	98 U
4-Bromophenyl-Phenylether		19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
4-Chloroaniline		96 U	96 U	96 U	99 U	98 U	97 U	99 U	98 U	95 U	99 U	97 U	98 U
4-Chlorophenyl-Phenylether		19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
4-Nitroaniline		96 U	96 U	96 U	99 U	98 U	97 U	99 U	98 U	95 U	99 U	97 U	98 U
Bis(2-Chloroethoxy)Methane		19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
Bis(2-Chloroethyl)Ether		19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
Carbazole		19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
Dibenzofuran	540	19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
Hexachlorobutadiene	11	*19 U*	*19 U*	*19 U*	*20 U*	*20 U*	*19 U*	*20 U*	*20 U*	*19 U*	*20 U*	*19 U*	*20 U*
Hexachlorocyclopentadiene		96 U	96 U	96 U	99 U	98 U	97 U	99 U	98 U	95 U	99 U	97 U	98 U
Hexachloroethane		19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
Isophorone		19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
Nitrobenzene		19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U
N-Nitroso-Di-N-Propylamine		96 U	96 U	96 U	99 U	98 U	97 U	99 U	98 U	95 U	99 U	97 U	98 U
N-Nitrosodiphenylamine	28	19 U	19 U	19 U	20 U	20 U	19 U	20 U	20 U	19 U	20 U	19 U	20 U

Table 6 - Analytical Results for Year 1 Sediment Samples - Semivolatile Organic Compounds (SVOCs)

Sample ID:	SQO	L-M-2005	M-M-2005	MD-M-2005	N-M-2005	O-M-2005	P-M-2005	Q-M-2005	R-M-2005	S-M-2005
Sampling Date:		8/15/2005	8/15/2005	8/15/2005	8/17/2005	8/15/2005	8/15/2005	8/15/2005	8/15/2005	8/15/2005
				Dup of M-M-2005						
LPAHs in µg/kg										
2-Methylnaphthalene	670	19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
Acenaphthene	500	19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
Acenaphthylene	1300	19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
Anthracene	960	19 U	20 U	37	20 U	19 U	19 U	19 U	19 U	19 U
Fluorene	540	19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
Naphthalene	2100	19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
Phenanthrene	1500	19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
Total LPAHs	5200	19 U	20 U	37	20 U	19 U	19 U	19 U	19 U	19 U
HPAHs in µg/kg										
Benzo(a)anthracene	1600	19 U	20 U	340	20 U	19 U	19 U	19 U	19 U	19 U
Benzo(a)pyrene	1600	19 UJ	20 U	330	20 U	19 U	19 U	19 U	19 U	19
Benzo(ghi)perylene	720	19 UJ	20 U	63	20 U	19 U	19 U	19 U	19 U	19 U
Chrysene	2800	19 U	20 U	680	21	19 U	21	21	20	21
Dibenz(a,h)anthracene	230	19 UJ	20 U	22 J	20 U	19 U	19 U	19 U	19 U	19 U
Fluoranthene	2500	22	20 U	88	44	19 U	33	32	32	33
Indeno(1,2,3-cd)pyrene	690	19 U	20 U	89	20 U	19 U	19 U	19 U	19 U	19 U
Pyrene	3300	32	23	110	38	19 U	28	28	27	28
Benzo(b)fluoranthene		19 UJ	20 U	450	21	19 U	19 U	20	19 U	20
Benzo(k)fluoranthene		19 UJ	20 U	300	20 U	19 U	19 U	19 U	19 U	19 U
Total Benzofluoranthenes	3600	19 UJ	20 U	750	21	19 U	19 U	20	19 U	20
Total HPAHs	17000	54	23	2472	124	19 U	82	101	79	121
Chlorinated Hydrocarbons in µg/kg										
1,2,4-Trichlorobenzene	51	19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
1,2-Dichlorobenzene	50	19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
1,3-Dichlorobenzene	170	19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
1,4-Dichlorobenzene	110	19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
Hexachlorobenzene	22	19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
Phthalates in µg/kg										
Bis(2-Ethylhexyl)Phthalate	1300	22 U	20 U	20 U	20 U	19 U	22 U	23 U	32 U	40 U
Butylbenzylphthalate	900	19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
Diethylphthalate	200	30	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
Dimethylphthalate	160	19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
Di-n-Butylphthalate	1400	62 U	20 U	30 U	59 U	19 U	19 U	19 U	19 U	19 U
Di-n-Octyl Phthalate	6200	19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
Phenolics (Acids) in µg/kg										
2,4,5-Trichlorophenol		97 U	99 U	98 U	98 U	97 U	95 U	97 U	96 U	95 U
2,4,6-Trichlorophenol		97 U	99 U	98 U	98 U	97 U	95 U	97 U	96 U	95 U
2,4-Dichlorophenol		97 U	99 U	98 U	98 U	97 U	95 U	97 U	96 U	95 U
2,4-Dimethylphenol	29	19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
2,4-Dinitrophenol		190 U	200 U	200 U	200 U	190 U	190 U	190 U	190 U	190 U
2-Chlorophenol		19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
2-Methylphenol	63	19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
2-Nitrophenol		97 U	99 U	98 U	98 U	97 U	95 U	97 U	96 U	95 U
4,6-Dinitro-2-Methylphenol		190 U	200 U	200 U	200 U	190 U	190 U	190 U	190 U	190 U
4-Chloro-3-Methylphenol		97 U	99 U	98 U	98 U	97 U	95 U	97 U	96 U	95 U

Table 6 - Analytical Results for Year 1 Sediment Samples - Semivolatile Organic Compounds (SVOCs)

Sample ID:	SQO	L-M-2005	M-M-2005	MD-M-2005	N-M-2005	O-M-2005	P-M-2005	Q-M-2005	R-M-2005	S-M-2005
Sampling Date:		8/15/2005	8/15/2005	8/15/2005	8/17/2005	8/15/2005	8/15/2005	8/15/2005	8/15/2005	8/15/2005
				Dup of M-M-2005						
4-Methylphenol	670	19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
4-Nitrophenol		97 U	99 U	98 U	98 U	97 U	95 U	97 U	96 U	95 U
Benzoic Acid	650	190 U	200 U	200 U	200 U	190 U	190 U	190 U	190 U	190 U
Benzyl Alcohol	73	19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
Pentachlorophenol	360	97 U	99 U	98 U	98 U	97 U	95 U	97 U	96 U	95 U
Phenol	420	19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	20
Misc. Extractables in µg/kg										
2,2'-Oxybis(1-Chloropropane)		19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
2,4-Dinitrotoluene		97 U	99 U	98 U	98 U	97 U	95 U	97 U	96 U	95 U
2,6-Dinitrotoluene		97 U	99 U	98 U	98 U	97 U	95 U	97 U	96 U	95 U
2-Chloronaphthalene		19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
2-Nitroaniline		97 U	99 U	98 U	98 U	97 U	95 U	97 U	96 U	95 U
3,3'-Dichlorobenzidine		97 U	99 U	98 U	98 U	97 U	95 U	97 U	96 U	95 U
3-Nitroaniline		97 U	99 U	98 U	98 U	97 U	95 U	97 U	96 U	95 U
4-Bromophenyl-Phenylether		19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
4-Chloroaniline		97 U	99 U	98 U	98 U	97 U	95 U	97 U	96 U	95 U
4-Chlorophenyl-Phenylether		19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
4-Nitroaniline		97 U	99 U	98 U	98 U	97 U	95 U	97 U	96 U	95 U
Bis(2-Chloroethoxy)Methane		19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
Bis(2-Chloroethyl)Ether		19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
Carbazole		19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
Dibenzofuran	540	19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
Hexachlorobutadiene	11	*19 U*	*20 U*	*20 U*	*20 U*	*19 U*	*19 U*	*19 U*	*19 U*	*19 U*
Hexachlorocyclopentadiene		97 U	99 U	98 U	98 U	97 U	95 U	97 U	96 U	95 U
Hexachloroethane		19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
Isophorone		19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
Nitrobenzene		19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U
N-Nitroso-Di-N-Propylamine		97 U	99 U	98 U	98 U	97 U	95 U	97 U	96 U	95 U
N-Nitrosodiphenylamine	28	19 U	20 U	20 U	20 U	19 U	19 U	19 U	19 U	19 U

Notes:
U = Not detected at or above detection limit indicated.
J = Estimated value.
Italics = Detection limit exceeds screening criteria.
Blank indicates no SQO established.

Table 7 - Analytical Results for Year 1 Sediment Samples - Volatile Organic Compounds (VOCs)

Sample ID:	SQO	A-2-M-2005	AB-M-2005	B-2-M-2005	CD-M-2005	E-M-2005	F-1-M-2005	FD-1-M-2005	F-2-M-2005	G-M-2005	HI-M-2005	J-M-2005	K-M-2005
Sampling Date:		8/15/2005	8/17/2005	8/17/2005	8/17/2005	8/17/2005	8/17/2005	8/17/2005	8/17/2005	8/15/2005	8/15/2005	8/15/2005	8/17/2005
								Dup of F-1-M-2005					
Volatiles in µg/kg													
1,1,1,2-Tetrachloroethane		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
1,1,1-Trichloroethane		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
1,1,2,2-Tetrachloroethane		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
1,1,2-Trichloro-1,2,2-trifluoroethane		1.8 U	1.8 U	2.1 U	1.8 U	2.0 U	1.9 U	1.9 U	1.8 U	1.8 U	1.8 U	1.9 U	1.9 U
1,1,2-Trichloroethane		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
1,1-Dichloroethane		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
1,1-Dichloroethene		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
1,1-Dichloropropene		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
1,2,3-Trichlorobenzene		4.6 U	4.5 U	5.1 U	4.6 U	5.0 U	4.7 U	4.8 U	4.6 U	4.6 U	4.6 U	4.8 U	4.7 U
1,2,3-Trichloropropane		1.8 U	1.8 U	2.1 U	1.8 U	2.0 U	1.9 U	1.9 U	1.8 U	1.8 U	1.8 U	1.9 U	1.9 U
1,2,4-Trichlorobenzene		4.6 U	4.5 U	5.1 U	4.6 U	5.0 U	4.7 U	4.8 U	4.6 U	4.6 U	4.6 U	4.8 U	4.7 U
1,2,4-Trimethylbenzene		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
1,2-Dibromo-3-chloropropane		4.6 U	4.5 U	5.1 U	4.6 U	5.0 U	4.7 U	4.8 U	4.6 U	4.6 U	4.6 U	4.8 U	4.7 U
1,2-Dichlorobenzene		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
1,2-Dichloroethane		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
1,2-Dichloropropane		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
1,3,5-Trimethylbenzene		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
1,3-Dichlorobenzene		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
1,3-Dichloropropane		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
1,4-Dichlorobenzene		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
2,2-Dichloropropane		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
2-Butanone		4.6 U	4.5 U	5.1 U	4.6 U	5.0 U	4.7 U	4.8 U	4.6 U	4.6 U	4.6 U	4.8 U	4.7 U
2-Chloroethylvinylether		4.6 U	4.5 U	5.1 U	4.6 U	5.0 U	4.7 U	4.8 U	4.6 U	4.6 U	4.6 U	4.8 U	4.7 U
2-Chlorotoluene		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
2-Hexanone		4.6 U	4.5 U	5.1 U	4.6 U	5.0 U	4.7 U	4.8 U	4.6 U	4.6 U	4.6 U	4.8 U	4.7 U
4-Chlorotoluene		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
4-Isopropyltoluene		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
4-Methyl-2-Pentanone (MIBK)		4.6 U	4.5 U	5.1 U	4.6 U	5.0 U	4.7 U	4.8 U	4.6 U	4.6 U	4.6 U	4.8 U	4.7 U
Acetone		4.6 U	4.5 U	5.1 U	4.6 U	11	9.8	12	6.8	8.8	10	12	4.7 U
Acrolein		46 U	45 U	51 U	46 U	50 U	47 U	48 U	46 U	46 U	46 U	48 U	47 U
Acrylonitrile		4.6 U	4.5 U	5.1 U	4.6 U	5.0 U	4.7 U	4.8 U	4.6 U	4.6 U	4.6 U	4.8 U	4.7 U
Benzene		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
Bromobenzene		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
Bromochloromethane		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
Bromodichloromethane		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
Bromoethane		1.8 U	1.8 U	2.1 U	1.8 U	2.0 U	1.9 U	1.9 U	1.8 U	1.8 U	1.8 U	1.9 U	1.9 U
Bromoform		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
Bromomethane		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
Carbon Disulfide		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
Carbon Tetrachloride		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
Chlorobenzene		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
Chloroethane		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
Chloroform		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
Chloromethane		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
cis-1,2-Dichloroethene		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
cis-1,3-Dichloropropene		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
Dibromochloromethane		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U

Table 7 - Analytical Results for Year 1 Sediment Samples - Volatile Organic Compounds (VOCs)

Sample ID:	SQO	A-2-M-2005	AB-M-2005	B-2-M-2005	CD-M-2005	E-M-2005	F-1-M-2005	FD-1-M-2005	F-2-M-2005	G-M-2005	HI-M-2005	J-M-2005	K-M-2005
Sampling Date:		8/15/2005	8/17/2005	8/17/2005	8/17/2005	8/17/2005	8/17/2005	8/17/2005	8/17/2005	8/15/2005	8/15/2005	8/15/2005	8/17/2005
								Dup of F-1-M-2005					
Dibromomethane		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
Ethylbenzene	10	0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
Ethylene Dibromide		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
Hexachlorobutadiene		4.6 U	4.5 U	5.1 U	4.6 U	5.0 U	4.7 U	4.8 U	4.6 U	4.6 U	4.6 U	4.8 U	4.7 U
Isopropylbenzene		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
Methyl Iodide		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
Methylene Chloride		1.8 U	2.1	2.8	1.8 U	2.0 U	1.9 U	1.9 U	1.8 U	1.8 U	1.8 U	1.9 U	1.9 U
Naphthalene		4.6 U	4.5 U	5.1 U	4.6 U	5.0 U	4.7 U	4.8 U	4.6 U	4.6 U	4.6 U	4.8 U	4.7 U
n-Butylbenzene		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
n-Propylbenzene		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
sec-Butylbenzene		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
Styrene		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
tert-Butylbenzene		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
Tetrachloroethene	57	0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
Toluene		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
trans-1,2-Dichloroethene		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
trans-1,3-Dichloropropene		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
trans-1,4-Dichloro-2-butene		4.6 U	4.5 U	5.1 U	4.6 U	5.0 U	4.7 U	4.8 U	4.6 U	4.6 U	4.6 U	4.8 U	4.7 U
Trichloroethene		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
Trichlorofluoromethane		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
Vinyl Acetate		4.6 U	4.5 U	5.1 U	4.6 U	5.0 U	4.7 U	4.8 U	4.6 U	4.6 U	4.6 U	4.8 U	4.7 U
Vinyl Chloride		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
m,p-Xylene		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
o-Xylene		0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U
Total Xylenes	40	0.9 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	1.0 U	0.9 U	0.9 U	0.9 U	1.0 U	0.9 U

Table 7 - Analytical Results for Year 1 Sediment Samples - Volatile Organic Compounds (VOCs)

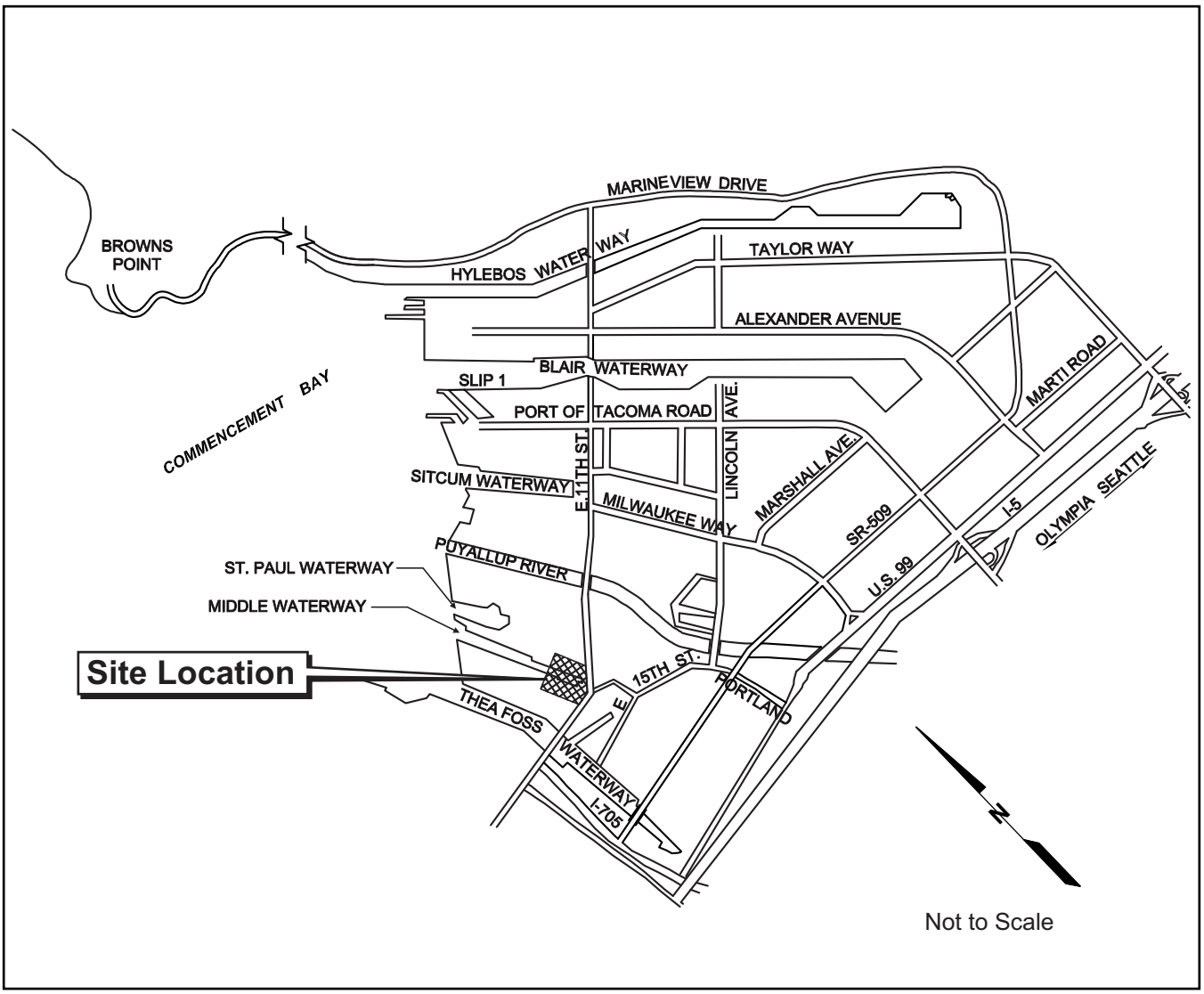
Sample ID:	SQO	L-M-2005	M-M-2005	MD-M-2005	N-M-2005	O-M-2005	P-M-2005	Q-M-2005	R-M-2005	S-M-2005
Sampling Date:		8/15/2005	8/15/2005	8/15/2005	8/17/2005	8/15/2005	8/15/2005	8/15/2005	8/15/2005	8/15/2005
				Dup of M-M-2005						
Volatiles in µg/kg										
1,1,1,2-Tetrachloroethane		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
1,1,1-Trichloroethane		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
1,1,2,2-Tetrachloroethane		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane		2.0 U	1.9 U	2.0 U	2.2 U	2.0 U	2.4 U	2.2 U	2.3 U	1.9 U
1,1,2-Trichloroethane		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
1,1-Dichloroethane		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
1,1-Dichloroethene		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
1,1-Dichloropropene		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
1,2,3-Trichlorobenzene		4.9 U	4.7 U	4.9 U	5.4 U	5.1 U	6.0 U	5.4 U	5.8 U	4.8 U
1,2,3-Trichloropropane		2.0 U	1.9 U	2.0 U	2.2 U	2.0 U	2.4 U	2.2 U	2.3 U	1.9 U
1,2,4-Trichlorobenzene		4.9 U	4.7 U	4.9 U	5.4 U	5.1 U	6.0 U	5.4 U	5.8 U	4.8 U
1,2,4-Trimethylbenzene		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
1,2-Dibromo-3-chloropropane		4.9 U	4.7 U	4.9 U	5.4 U	5.1 U	6.0 U	5.4 U	5.8 U	4.8 U
1,2-Dichlorobenzene		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
1,2-Dichloroethane		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
1,2-Dichloropropane		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
1,3,5-Trimethylbenzene		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
1,3-Dichlorobenzene		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
1,3-Dichloropropane		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
1,4-Dichlorobenzene		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
2,2-Dichloropropane		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
2-Butanone		4.9 U	4.7 U	4.9 U	5.4 U	5.1 U	6.0 U	5.4 U	5.8 U	4.8 U
2-Chloroethylvinylether		4.9 U	4.7 U	4.9 U	5.4 U	5.1 U	6.0 U	5.4 U	5.8 U	4.8 U
2-Chlorotoluene		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
2-Hexanone		4.9 U	4.7 U	4.9 U	5.4 U	5.1 U	6.0 U	5.4 U	5.8 U	4.8 U
4-Chlorotoluene		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
4-Isopropyltoluene		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
4-Methyl-2-Pentanone (MIBK)		4.9 U	4.7 U	4.9 U	5.4 U	5.1 U	6.0 U	5.4 U	5.8 U	4.8 U
Acetone		12	16	20	5.4 U	5.1 U	6.0 U	5.4 U	5.8 U	4.8 U
Acrolein		49 U	47 U	49 U	54 U	51 U	60 U	54 U	58 U	48 U
Acrylonitrile		4.9 U	4.7 U	4.9 U	5.4 U	5.1 U	6.0 U	5.4 U	5.8 U	4.8 U
Benzene		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
Bromobenzene		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
Bromochloromethane		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
Bromodichloromethane		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
Bromoethane		2.0 U	1.9 U	2.0 U	2.2 U	2.0 U	2.4 U	2.2 U	2.3 U	1.9 U
Bromoform		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
Bromomethane		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
Carbon Disulfide		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
Carbon Tetrachloride		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
Chlorobenzene		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
Chloroethane		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
Chloroform		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
Chloromethane		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
cis-1,2-Dichloroethene		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
cis-1,3-Dichloropropene		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
Dibromochloromethane		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U

Table 7 - Analytical Results for Year 1 Sediment Samples - Volatile Organic Compounds (VOCs)

Sample ID:	SQO	L-M-2005	M-M-2005	MD-M-2005	N-M-2005	O-M-2005	P-M-2005	Q-M-2005	R-M-2005	S-M-2005
Sampling Date:		8/15/2005	8/15/2005	8/15/2005	8/17/2005	8/15/2005	8/15/2005	8/15/2005	8/15/2005	8/15/2005
				Dup of M-M-2005						
Dibromomethane		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
Ethylbenzene	10	1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
Ethylene Dibromide		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
Hexachlorobutadiene		4.9 U	4.7 U	4.9 U	5.4 U	5.1 U	6.0 U	5.4 U	5.8 U	4.8 U
Isopropylbenzene		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
Methyl Iodide		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
Methylene Chloride		2.0 U	3.5	4.7	2.2 U	2.0 U	2.4 U	2.2 U	2.3 U	1.9 U
Naphthalene		4.9 U	4.7 U	4.9 U	5.4 U	5.1 U	6.0 U	5.4 U	5.8 U	4.8 U
n-Butylbenzene		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
n-Propylbenzene		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
sec-Butylbenzene		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
Styrene		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
tert-Butylbenzene		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
Tetrachloroethene	57	1.0 U	0.9 U	1.0 U	1.1 U	3.8	1.2 U	1.1 U	1.2 U	1.0 U
Toluene		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
trans-1,2-Dichloroethene		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
trans-1,3-Dichloropropene		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
trans-1,4-Dichloro-2-butene		4.9 U	4.7 U	4.9 U	5.4 U	5.1 U	6.0 U	5.4 U	5.8 U	4.8 U
Trichloroethene		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
Trichlorofluoromethane		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
Vinyl Acetate		4.9 U	4.7 U	4.9 U	5.4 U	5.1 U	6.0 U	5.4 U	5.8 U	4.8 U
Vinyl Chloride		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
m,p-Xylene		1.0 U	0.9 U	1.2	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
o-Xylene		1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U
Total Xylenes	40	1.0 U	0.9 U	1.0 U	1.1 U	1.0 U	1.2 U	1.1 U	1.2 U	1.0 U

Notes:
U = Not detected at or above detection limit indicated.
Blank indicates no SQO established.

Vicinity Map
Middle Waterway Problem Area C



794602AA.cdr HEL 9/26/05

Note: Base map prepared from Microsoft Streets and Trips 2002.

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7946-02 ***12/05***

Figure 1

Site Plan
Middle Waterway Problem Area C

EAL 12/12/06 7946602-002.DWG

51b SMU Number

SMU Boundary (Within Area C)

Northern Extent of Area C

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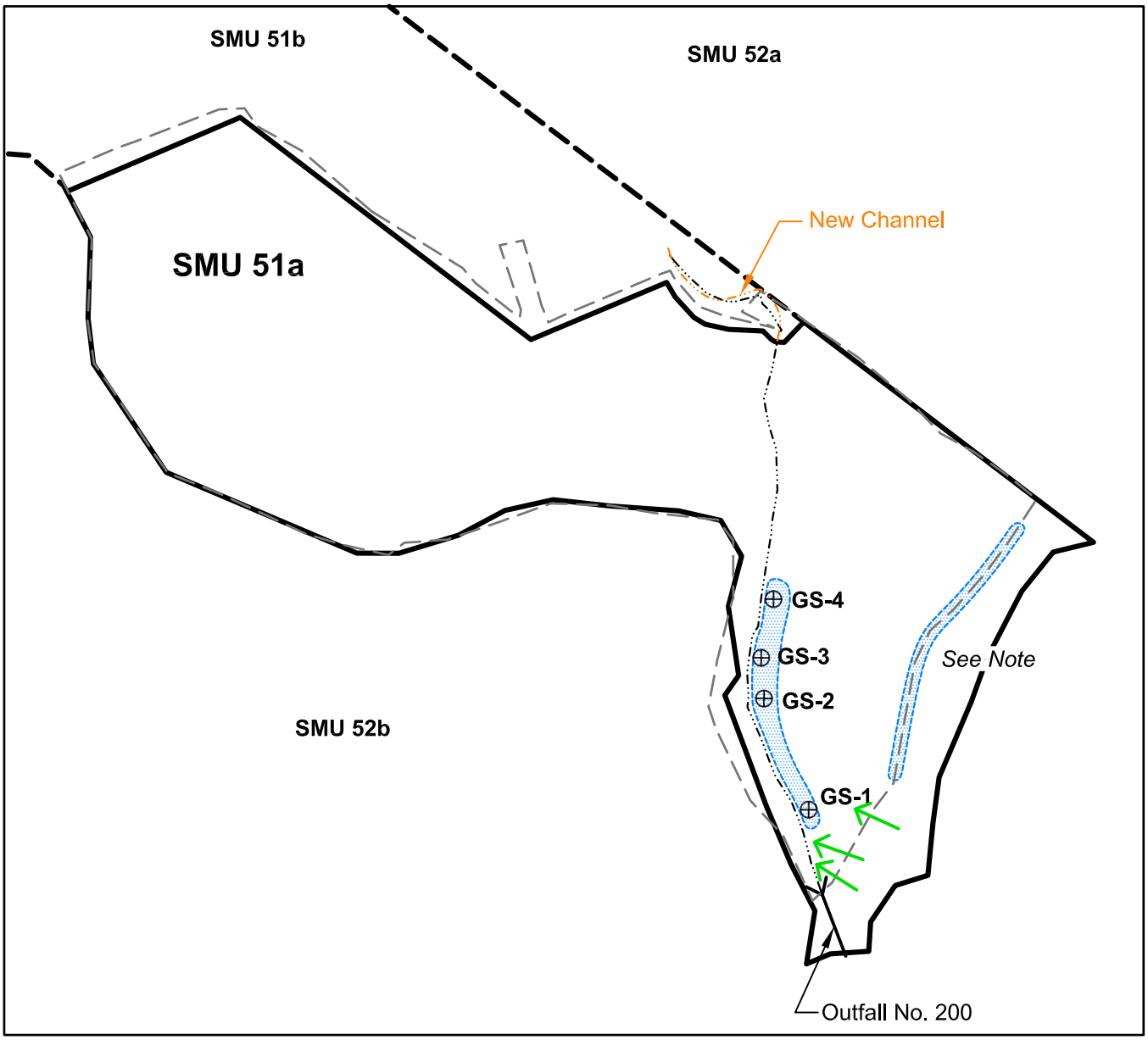
7946-02 *12/06*

Figure 2

Long-Term Grade Monitoring Location Plan and Stabilized Erosion Areas (SMU 51a)

Middle Waterway Problem Area C



EAL 12/12/06 794602-004.DWG

Note: Jute mats placed along stabilized bank area in May 2005.

SMU 51a Boundary

SMU 51b Boundary

SMU 51a Excavation Limit

Outfall No. 200 Drainage Channel Centerline (See Table 1 elevation survey data)

GS-1 ⊕ Elevation Monitoring Grade Stake Location and Number (Established October, 2004)

Minor Bank Gully Features (Stabilized)

Stabilized Bank and Outfall Discharge Channel Erosion Areas

N

0 50 100

Scale in Feet

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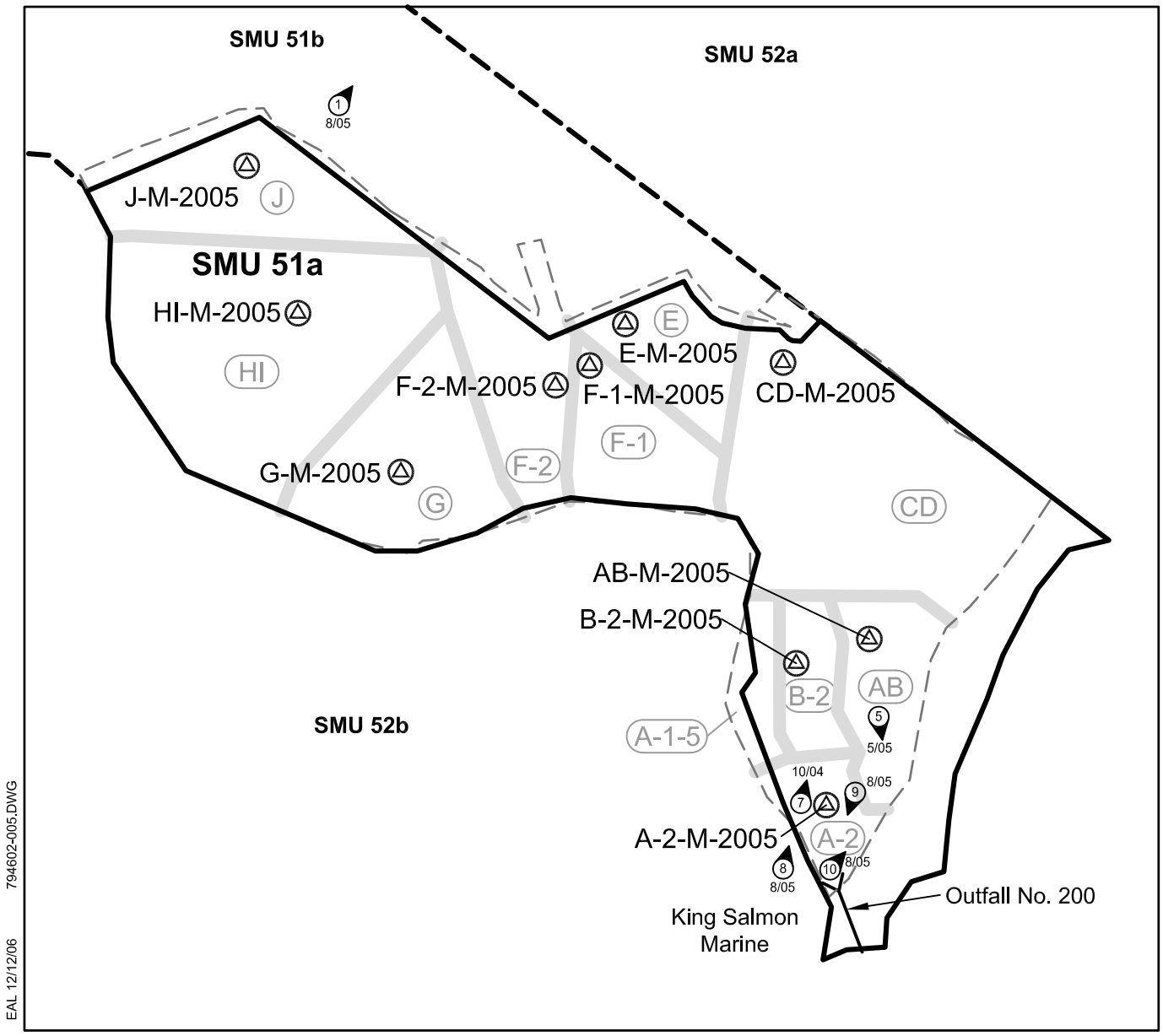
Figure 3

Year 1 Sediment Sampling Grids and Photograph Location Plan (SMU 51a)
Middle Waterway Problem Area C



SMU 51a Boundary

SMU 51b Boundary

SMU 51a Excavation Limit

Sediment Verification Sampling Grid and Designation (A)

A-2-M-2005 — Year 1 Discrete Surface Sample Location and Number

5 8/05 — Photograph Location, Number, Direction, and Month/Year

N

0 50 100
Scale in Feet

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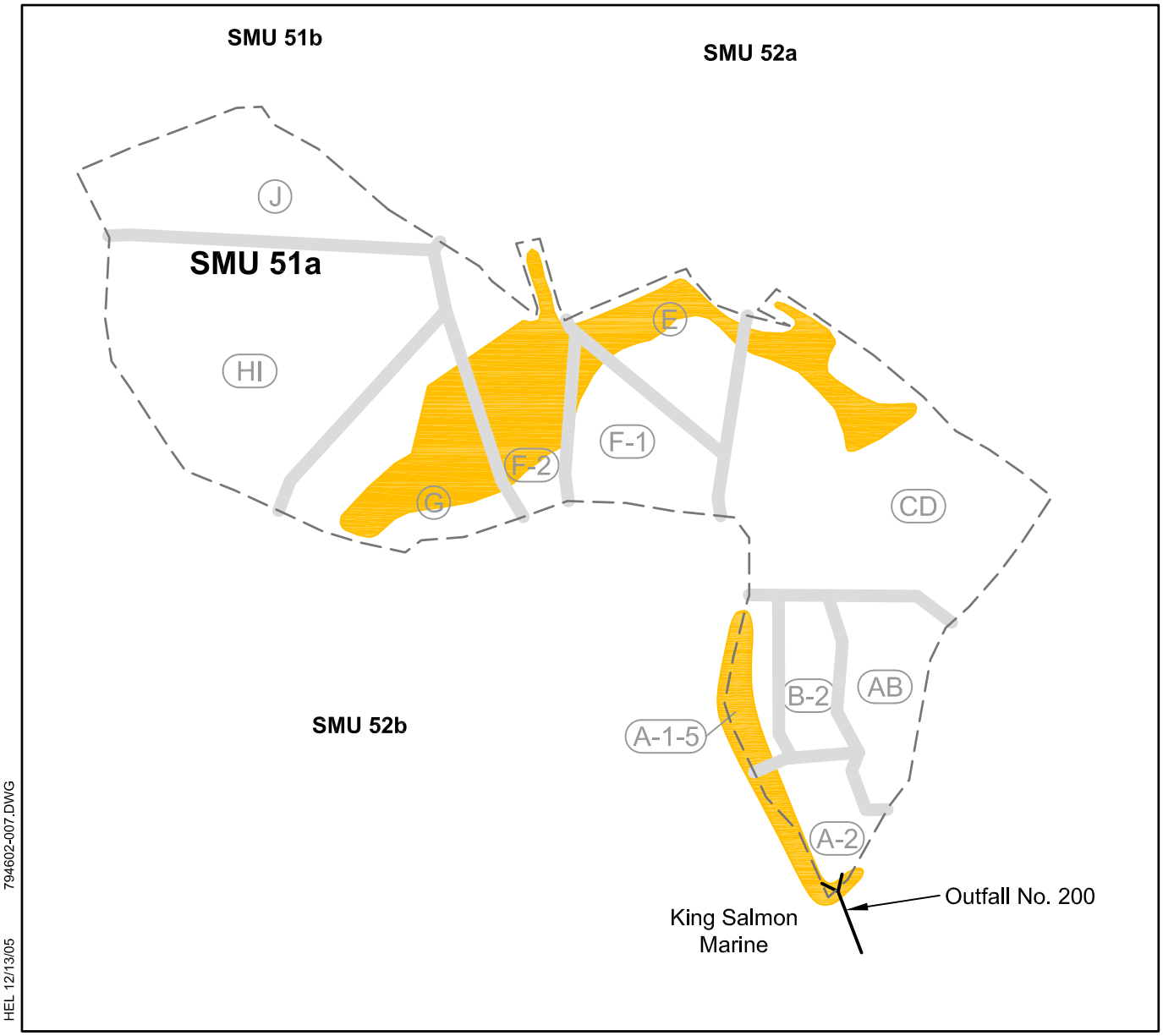
Figure 4

Excavated Areas with Visibly Contaminated Sediments (SMU 51a)
Middle Waterway Problem Area C



SMU 51a Excavation Limit

(A) Sediment Verification Sampling Grid and Designation

Approximate Area of Visibly Contaminated Sediment Removed During SMU 51a Excavation*

N

0 50 100
Scale in Feet

* All visibly contaminated sediment was removed within the SMU 51a excavation boundary.

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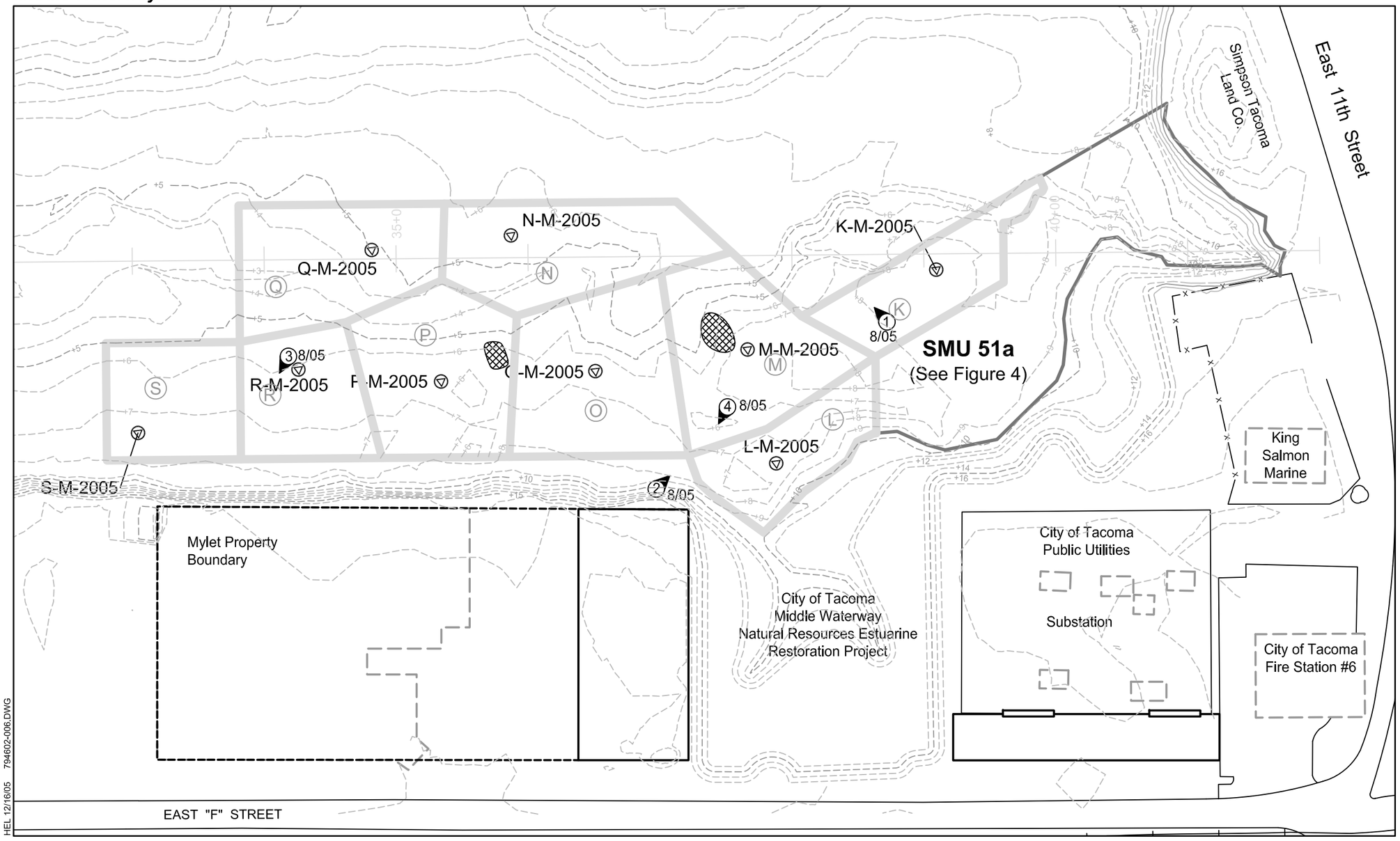
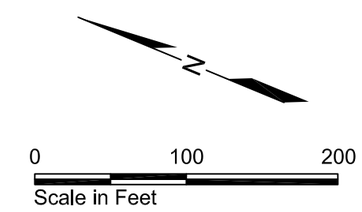
Figure 5

Year 1 Surface Sediment Sampling Grids and Photograph Location Plan (SMU 51b)
Middle Waterway Problem Area C





SMU 51a Boundary

SMU 51b Boundary

O-M-2005 Year 1 Discrete Surface Sample Location and Number

Sediment Sampling Grid and Designation

8/05 Photograph Location, Number, Direction, and Month/Year

Suspected Ghost Shrimp Burrow Area

Notes:
1. Elevation contours outside SMU 51a and SMU 51b from Foster Wheeler and Blue Water Engineering Survey, 1998.
2. Elevation contours within SMU 51a and SMU 51b from Baseline Engineering Survey, October 2004.

Vertical Datum:
Datum: Corps of Engineers mean lower low water based on benchmark: BME406 1965 monument located on the south side of the east end of the East 11th Street bridge elevation: 24.09'

Basis of Bearings:
Washington State Plane coordinate system south zone, NAD83/1991

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7946-02 *12/05*

Figure 6

APPENDIX A
YEAR 1 PHOTOGRAPHS

Photograph 1 - SMU 51b thin-layer capping material (foreground) and adjacent tideflat beyond.

Photograph 2 - Greenish algal growth on tideflat.

Photograph 3 - Green algal surface on tideflat. Note fine black sediment at bottom right.

Photograph 4 - Burrows from near-surface biological recruitment.

Photograph 5 - Jute mats placed on stabilized bank, May 2005.

Photograph 6 - Curb for water retention and parking area, August 2005 (installed December 2004). Constructed curb prevents stormwater run-off from migrating to upper SMU 51a bank.

Photograph 7 - Minor erosion features along east side slope of outfall drainage channel during Year 0 monitoring.

Photograph 8 - Stabilized minor erosion features along east side slope of outfall drainage channel.

Photograph 9 - Debris in outfall (subsequently removed).

Photograph 10 - Debris in SMU 51 upper interidal zone.

APPENDIX B
CERTIFICATES OF ANALYSIS
ANALYTICAL RESOURCES, INC.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Case Narrative

Client: Hart Crowser
Client Project: 7946-02 / Middle Waterway Year 1
ARI Job No: IK93
Matrices: Sediments/Rinsate/Trip Blank
Date: September 13, 2005

Volatile Organic Compounds Analysis referencing EPA SW-846 method 8260B

No analytical complications were noted for these analyses.

Semivolatile Organic Compounds Analysis referencing EPA SW-846 method 8270C

The analyst noted that many of the samples were initially analyzed with dilution due to the very dark color of the extracts. All QC was in compliance. The analyst re-ran the diluted samples without dilution. The d12-perylene internal standard showed areas below the QC limit in the undiluted analyses of samples **K-M-2005**, **MD-M-2005**, **L-M-2005**, **J-M-2005**, **HI-M-2005**, **G-M-2005**, **A-2-M-2005**, **K-M-2005**, and **AB-M-2005**. Both sets of analyses have been reported for these samples.

Bis(2-ethylhexyl)phthalate was detected in both of the method blanks associated with the sediments at approximately half of the reporting limit. Detections of this compound in the samples have been qualified with "B" flags.

The laboratory control sample associated with the rinsate blank was spiked with the low-level semivolatiles spike in error. The surrogates and spikes were recovered within the QC limits. The client was consulted and requested that the rinsate sample be re-extracted. Because the re-extraction occurred past the seven-day holding time, both analyses have been reported. No further analytical complications were noted for these analyses.

Pesticide Analysis referencing EPA SW-846 method 8081

The analyst noted that the extracts were very dark in appearance. In the initial analysis of the samples, the DDT breakdown was above the QC limit and the last two C-Cals failed. The samples were re-analyzed on a different instrument. The DDT breakdown was again above the QC limit and the last two sets of C-Cals again failed, indicating matrix effect. Because the QC for the re-analysis was somewhat better, only the second analysis has been reported. The specific failures are noted on the pesticide ECD 4 run log for 8/31/05. No further analytical complications were noted for these analyses.

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Analytical Resources, Incorporated
Analytical Chemists and Consultants

PCB Analysis referencing EPA SW-846 method 8082

The analyst noted that the 1016 C-Cal run on 8/23/05 at 1847 showed %D 3.3% greater than the QC limit of 15% on the ZB35 column. There were no detections of 1016 in the samples and the data reviewer determined that no corrective action was necessary. No further analytical complications were noted for these analyses.

Total Metals referencing SW-846 methods 6010B and 7471A

A matrix spike and sample duplicate were performed for samples **S-M-2005** and **B-2-M-2005.** The recoveries of antimony in the matrix spikes were below the QC limit of 75%. Low spike recoveries are typical for antimony. The low recovery of antimony is due to formation of Sb205 in the presence of nitric acid. This antimony oxide compound is very adsorptive and is lost on silicate surfaces (i.e.. sand, soil and glass beakers). The addition of HCl to the digestion, as required by method 3050 for ICP analysis, converts some of this adsorptive oxide to the SbCl6 anion, which does not adsorb on undigested siliceous materials. Recoveries of antimony in both reference materials were good, so no corrective action was taken. No further analytical complications were noted for these analyses.

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Sample Custody Record

Samples Shipped to: AR 1

Sheet 1/2

HARTCROWSER

Hart Crowser, In
1910 Fairview Avenue Ea
Seattle, Washington 98102-369
Phone: 206-324-9530 FAX: 206-328-558

JOB 7746-02 LAB NUMBER

PROJECT NAME Middle Waterway Year 1

HART CROWSER CONTACT

SAMPLED BY: AEF

REQUESTED ANALYSIS

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	VOA (EPA 8260)	TPH (Ecology)	PAH (EPA 8270)	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	E-M-2005		9/8/05	8:00	SED	X	X	X	3	
	G-M-2005			8:30		X	X	X	3	
	R-M-2005			9:20		X	X	X	3	
	P-M-2005			10:00		X	X	X	3	
	D-M-2005			10:15		X	X	X	3	
	M-M-2005			10:40		X	X	X	3	
	MD-M-2005			10:40		X	X	X	3	
	L-M-2005			11:55		X	X	X	3	
	J-M-2005			11:35		X	X	X	3	
	H1-M-2005			12:00		X	X	X	3	
	G-M-2005			12:30		X	X	X	3	
	A-2-M-2005			12:50		X	X	X	3	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	9/17	SIGNATURE	
PRINT NAME	TIME	PRINT NAME	TIME
COMPANY	1825	COMPANY	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE		SIGNATURE	
PRINT NAME	TIME	PRINT NAME	TIME
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

TOTAL NUMBER OF CONTAINERS

SAMPLE RECEIPT INFORMATION
CUSTODY SEALS:
☐YES ☐NO ☐N/A
GOOD CONDITION
☐YES ☐NO
TEMPERATURE
SHIPMENT METHOD: ☐HAND
☐COURIER ☐OVERNIGHT

COOLER NO.: STORAGE LOCATION:

See Lab Work Order No.
for Other Contract Requirements

TURNAROUND TIME:
☐ 24 HOURS ☐ 1 WEEK
☐ 48 HOURS ☐ STANDARD
☐ 72 HOURS OTHER

White and Yellow Copies to Lab Pink to Project Manager Lab to Return White Copy to Hart Crowser Gold to Sample Custodian

Sample Custody Record

Sheet 2/2

HARTCROWSER

Hart Crowser, I
1910 Fairview Avenue E
Seattle, Washington 98102-36
Phone: 206-324-9530 FAX: 206-328-55

Samples Shipped to: AFI

JOB 7441-02 LAB NUMBER

PROJECT NAME Mobile Waterway

HART CROWSER CONTACT

SAMPLED BY: AEI

REQUESTED ANALYSIS

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	VOA (EPA 624)	PCB (EPA 8082)	Total Metals (EPA 6010)	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	N-[illegible]		1/17	8:05	SED	X		X	2	
	K-[illegible]			830		X	X	X	2	
	F-2-[illegible]			955		X	X	X	2	
	F-1-[illegible]			950		X		X	2	
	F-1-[illegible]			950		X	X	X	2	
	E-[illegible]			1020		X	X	X	2	
	D-[illegible]			1100		X	X	X	2	
	A-[illegible]			1120		X	X	X	2	
	B-2-[illegible]			1135		X	X	X	2	
	[illegible]		1/17	[illegible]	[illegible]	X	X	X	6	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	1/17	SIGNATURE	
PRINT NAME	TIME	PRINT NAME	TIME
COMPANY	1125	COMPANY	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE		SIGNATURE	
PRINT NAME	TIME	PRINT NAME	TIME
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

TOTAL NUMBER OF CONTAINERS

SAMPLE RECEIPT INFORMATION
CUSTODY SEALS: ☐YES ☐NO ☐N/A
GOOD CONDITION ☐YES ☐NO
TEMPERATURE
SHIPMENT METHOD: ☐HAND ☐COURIER ☐OVERNIGHT

COOLER NO.: STORAGE LOCATION:

See Lab Work Order No. for Other Contract Requirements

TURNAROUND TIME:
☐ 24 HOURS ☐ 1 WEEK
☐ 48 HOURS ☐ STANDARD
☐ 72 HOURS OTHER

White and Yellow Copies to Lab Pink to Project Manager Lab to Return White Copy to Hart Crowser Gold to Sample Custodian

VOLATILE ORGANIC COMPOUNDS

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: A-2-M-2005
SAMPLE

Lab Sample ID: IK93L
LIMS ID: 05-14189
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Instrument/Analyst: FINN5/PAB
Date Analyzed: 08/26/05 16:05

Sample Amount: 5.46 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 12.5%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.9	< 0.9	U
74-83-9	Bromomethane	0.9	< 0.9	U
75-01-4	Vinyl Chloride	0.9	< 0.9	U
75-00-3	Chloroethane	0.9	< 0.9	U
75-09-2	Methylene Chloride	1.8	< 1.8	U
67-64-1	Acetone	4.6	< 4.6	U
75-15-0	Carbon Disulfide	0.9	< 0.9	U
75-35-4	1,1-Dichloroethene	0.9	< 0.9	U
75-34-3	1,1-Dichloroethane	0.9	< 0.9	U
156-60-5	trans-1,2-Dichloroethene	0.9	< 0.9	U
156-59-2	cis-1,2-Dichloroethene	0.9	< 0.9	U
67-66-3	Chloroform	0.9	< 0.9	U
107-06-2	1,2-Dichloroethane	0.9	< 0.9	U
78-93-3	2-Butanone	4.6	< 4.6	U
71-55-6	1,1,1-Trichloroethane	0.9	< 0.9	U
56-23-5	Carbon Tetrachloride	0.9	< 0.9	U
108-05-4	Vinyl Acetate	4.6	< 4.6	U
75-27-4	Bromodichloromethane	0.9	< 0.9	U
78-87-5	1,2-Dichloropropane	0.9	< 0.9	U
10061-01-5	cis-1,3-Dichloropropene	0.9	< 0.9	U
79-01-6	Trichloroethene	0.9	< 0.9	U
124-48-1	Dibromochloromethane	0.9	< 0.9	U
79-00-5	1,1,2-Trichloroethane	0.9	< 0.9	U
71-43-2	Benzene	0.9	< 0.9	U
10061-02-6	trans-1,3-Dichloropropene	0.9	< 0.9	U
110-75-8	2-Chloroethylvinylether	4.6	< 4.6	U
75-25-2	Bromoform	0.9	< 0.9	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	4.6	< 4.6	U
591-78-6	2-Hexanone	4.6	< 4.6	U
127-18-4	Tetrachloroethene	0.9	< 0.9	U
79-34-5	1,1,2,2-Tetrachloroethane	0.9	< 0.9	U
108-88-3	Toluene	0.9	< 0.9	U
108-90-7	Chlorobenzene	0.9	< 0.9	U
100-41-4	Ethylbenzene	0.9	< 0.9	U
100-42-5	Styrene	0.9	< 0.9	U
75-69-4	Trichlorofluoromethane	0.9	< 0.9	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	1.8	< 1.8	U
1330-20-7	m,p-Xylene	0.9	< 0.9	U
95-47-6	o-Xylene	0.9	< 0.9	U
95-50-1	1,2-Dichlorobenzene	0.9	< 0.9	U
541-73-1	1,3-Dichlorobenzene	0.9	< 0.9	U
106-46-7	1,4-Dichlorobenzene	0.9	< 0.9	U
107-02-8	Acrolein	46	< 46	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: A-2-M-2005
SAMPLE

Lab Sample ID: IK93L
LIMS ID: 05-14189
Matrix: Sediment
Date Analyzed: 08/26/05 16:05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	0.9	< 0.9	U
74-96-4	Bromoethane	1.8	< 1.8	U
107-13-1	Acrylonitrile	4.6	< 4.6	U
563-58-6	1,1-Dichloropropene	0.9	< 0.9	U
74-95-3	Dibromomethane	0.9	< 0.9	U
630-20-6	1,1,1,2-Tetrachloroethane	0.9	< 0.9	U
96-12-8	1,2-Dibromo-3-chloropropane	4.6	< 4.6	U
96-18-4	1,2,3-Trichloropropane	1.8	< 1.8	U
110-57-6	trans-1,4-Dichloro-2-butene	4.6	< 4.6	U
108-67-8	1,3,5-Trimethylbenzene	0.9	< 0.9	U
95-63-6	1,2,4-Trimethylbenzene	0.9	< 0.9	U
87-68-3	Hexachlorobutadiene	4.6	< 4.6	U
106-93-4	Ethylene Dibromide	0.9	< 0.9	U
74-97-5	Bromochloromethane	0.9	< 0.9	U
594-20-7	2,2-Dichloropropane	0.9	< 0.9	U
142-28-9	1,3-Dichloropropane	0.9	< 0.9	U
98-82-8	Isopropylbenzene	0.9	< 0.9	U
103-65-1	n-Propylbenzene	0.9	< 0.9	U
108-86-1	Bromobenzene	0.9	< 0.9	U
95-49-8	2-Chlorotoluene	0.9	< 0.9	U
106-43-4	4-Chlorotoluene	0.9	< 0.9	U
98-06-6	tert-Butylbenzene	0.9	< 0.9	U
135-98-8	sec-Butylbenzene	0.9	< 0.9	U
99-87-6	4-Isopropyltoluene	0.9	< 0.9	U
104-51-8	n-Butylbenzene	0.9	< 0.9	U
120-82-1	1,2,4-Trichlorobenzene	4.6	< 4.6	U
91-20-3	Naphthalene	4.6	< 4.6	U
87-61-6	1,2,3-Trichlorobenzene	4.6	< 4.6	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	122%
d8-Toluene	99.1%
Bromofluorobenzene	88.4%
d4-1,2-Dichlorobenzene	91.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: AB-M-2005
SAMPLE

Lab Sample ID: IK93T
LIMS ID: 05-14197
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Instrument/Analyst: FINN5/PAB
Date Analyzed: 08/27/05 17:25

Sample Amount: 5.51 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 14.2%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.9	< 0.9	U
74-83-9	Bromomethane	0.9	< 0.9	U
75-01-4	Vinyl Chloride	0.9	< 0.9	U
75-00-3	Chloroethane	0.9	< 0.9	U
75-09-2	**Methylene Chloride**	**1.8**	**2.1**	
67-64-1	Acetone	4.5	< 4.5	U
75-15-0	Carbon Disulfide	0.9	< 0.9	U
75-35-4	1,1-Dichloroethene	0.9	< 0.9	U
75-34-3	1,1-Dichloroethane	0.9	< 0.9	U
156-60-5	trans-1,2-Dichloroethene	0.9	< 0.9	U
156-59-2	cis-1,2-Dichloroethene	0.9	< 0.9	U
67-66-3	Chloroform	0.9	< 0.9	U
107-06-2	1,2-Dichloroethane	0.9	< 0.9	U
78-93-3	2-Butanone	4.5	< 4.5	U
71-55-6	1,1,1-Trichloroethane	0.9	< 0.9	U
56-23-5	Carbon Tetrachloride	0.9	< 0.9	U
108-05-4	Vinyl Acetate	4.5	< 4.5	U
75-27-4	Bromodichloromethane	0.9	< 0.9	U
78-87-5	1,2-Dichloropropane	0.9	< 0.9	U
10061-01-5	cis-1,3-Dichloropropene	0.9	< 0.9	U
79-01-6	Trichloroethene	0.9	< 0.9	U
124-48-1	Dibromochloromethane	0.9	< 0.9	U
79-00-5	1,1,2-Trichloroethane	0.9	< 0.9	U
71-43-2	Benzene	0.9	< 0.9	U
10061-02-6	trans-1,3-Dichloropropene	0.9	< 0.9	U
110-75-8	2-Chloroethylvinylether	4.5	< 4.5	U
75-25-2	Bromoform	0.9	< 0.9	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	4.5	< 4.5	U
591-78-6	2-Hexanone	4.5	< 4.5	U
127-18-4	Tetrachloroethene	0.9	< 0.9	U
79-34-5	1,1,2,2-Tetrachloroethane	0.9	< 0.9	U
108-88-3	Toluene	0.9	< 0.9	U
108-90-7	Chlorobenzene	0.9	< 0.9	U
100-41-4	Ethylbenzene	0.9	< 0.9	U
100-42-5	Styrene	0.9	< 0.9	U
75-69-4	Trichlorofluoromethane	0.9	< 0.9	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	1.8	< 1.8	U
1330-20-7	m,p-Xylene	0.9	< 0.9	U
95-47-6	o-Xylene	0.9	< 0.9	U
95-50-1	1,2-Dichlorobenzene	0.9	< 0.9	U
541-73-1	1,3-Dichlorobenzene	0.9	< 0.9	U
106-46-7	1,4-Dichlorobenzene	0.9	< 0.9	U
107-02-8	Acrolein	45	< 45	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: AB-M-2005
SAMPLE

Lab Sample ID: IK93T
LIMS ID: 05-14197
Matrix: Sediment
Date Analyzed: 08/27/05 17:25

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	0.9	< 0.9	U
74-96-4	Bromoethane	1.8	< 1.8	U
107-13-1	Acrylonitrile	4.5	< 4.5	U
563-58-6	1,1-Dichloropropene	0.9	< 0.9	U
74-95-3	Dibromomethane	0.9	< 0.9	U
630-20-6	1,1,1,2-Tetrachloroethane	0.9	< 0.9	U
96-12-8	1,2-Dibromo-3-chloropropane	4.5	< 4.5	U
96-18-4	1,2,3-Trichloropropane	1.8	< 1.8	U
110-57-6	trans-1,4-Dichloro-2-butene	4.5	< 4.5	U
108-67-8	1,3,5-Trimethylbenzene	0.9	< 0.9	U
95-63-6	1,2,4-Trimethylbenzene	0.9	< 0.9	U
87-68-3	Hexachlorobutadiene	4.5	< 4.5	U
106-93-4	Ethylene Dibromide	0.9	< 0.9	U
74-97-5	Bromochloromethane	0.9	< 0.9	U
594-20-7	2,2-Dichloropropane	0.9	< 0.9	U
142-28-9	1,3-Dichloropropane	0.9	< 0.9	U
98-82-8	Isopropylbenzene	0.9	< 0.9	U
103-65-1	n-Propylbenzene	0.9	< 0.9	U
108-86-1	Bromobenzene	0.9	< 0.9	U
95-49-8	2-Chlorotoluene	0.9	< 0.9	U
106-43-4	4-Chlorotoluene	0.9	< 0.9	U
98-06-6	tert-Butylbenzene	0.9	< 0.9	U
135-98-8	sec-Butylbenzene	0.9	< 0.9	U
99-87-6	4-Isopropyltoluene	0.9	< 0.9	U
104-51-8	n-Butylbenzene	0.9	< 0.9	U
120-82-1	1,2,4-Trichlorobenzene	4.5	< 4.5	U
91-20-3	Naphthalene	4.5	< 4.5	U
87-61-6	1,2,3-Trichlorobenzene	4.5	< 4.5	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	128%
d8-Toluene	101%
Bromofluorobenzene	86.4%
d4-1,2-Dichlorobenzene	87.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: B-2-M-2005
SAMPLE

Lab Sample ID: IK93U
LIMS ID: 05-14198
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Instrument/Analyst: FINN5/PAB
Date Analyzed: 08/27/05 17:53

Sample Amount: 4.86 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 20.3%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	1.0	< 1.0	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	1.0	< 1.0	U
75-00-3	Chloroethane	1.0	< 1.0	U
75-09-2	**Methylene Chloride**	**2.1**	**2.8**	
67-64-1	Acetone	5.1	< 5.1	U
75-15-0	Carbon Disulfide	1.0	< 1.0	U
75-35-4	1,1-Dichloroethene	1.0	< 1.0	U
75-34-3	1,1-Dichloroethane	1.0	< 1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	< 1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	< 1.0	U
67-66-3	Chloroform	1.0	< 1.0	U
107-06-2	1,2-Dichloroethane	1.0	< 1.0	U
78-93-3	2-Butanone	5.1	< 5.1	U
71-55-6	1,1,1-Trichloroethane	1.0	< 1.0	U
56-23-5	Carbon Tetrachloride	1.0	< 1.0	U
108-05-4	Vinyl Acetate	5.1	< 5.1	U
75-27-4	Bromodichloromethane	1.0	< 1.0	U
78-87-5	1,2-Dichloropropane	1.0	< 1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	< 1.0	U
79-01-6	Trichloroethene	1.0	< 1.0	U
124-48-1	Dibromochloromethane	1.0	< 1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	< 1.0	U
71-43-2	Benzene	1.0	< 1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	< 1.0	U
110-75-8	2-Chloroethylvinylether	5.1	< 5.1	U
75-25-2	Bromoform	1.0	< 1.0	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.1	< 5.1	U
591-78-6	2-Hexanone	5.1	< 5.1	U
127-18-4	Tetrachloroethene	1.0	< 1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
108-90-7	Chlorobenzene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
100-42-5	Styrene	1.0	< 1.0	U
75-69-4	Trichlorofluoromethane	1.0	< 1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	2.1	< 2.1	U
1330-20-7	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0	U
107-02-8	Acrolein	51	< 51	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: B-2-M-2005
SAMPLE

Lab Sample ID: IK93U
LIMS ID: 05-14198
Matrix: Sediment
Date Analyzed: 08/27/05 17:53

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	2.1	< 2.1	U
107-13-1	Acrylonitrile	5.1	< 5.1	U
563-58-6	1,1-Dichloropropene	1.0	< 1.0	U
74-95-3	Dibromomethane	1.0	< 1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	< 1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.1	< 5.1	U
96-18-4	1,2,3-Trichloropropane	2.1	< 2.1	U
110-57-6	trans-1,4-Dichloro-2-butene	5.1	< 5.1	U
108-67-8	1,3,5-Trimethylbenzene	1.0	< 1.0	U
95-63-6	1,2,4-Trimethylbenzene	1.0	< 1.0	U
87-68-3	Hexachlorobutadiene	5.1	< 5.1	U
106-93-4	Ethylene Dibromide	1.0	< 1.0	U
74-97-5	Bromochloromethane	1.0	< 1.0	U
594-20-7	2,2-Dichloropropane	1.0	< 1.0	U
142-28-9	1,3-Dichloropropane	1.0	< 1.0	U
98-82-8	Isopropylbenzene	1.0	< 1.0	U
103-65-1	n-Propylbenzene	1.0	< 1.0	U
108-86-1	Bromobenzene	1.0	< 1.0	U
95-49-8	2-Chlorotoluene	1.0	< 1.0	U
106-43-4	4-Chlorotoluene	1.0	< 1.0	U
98-06-6	tert-Butylbenzene	1.0	< 1.0	U
135-98-8	sec-Butylbenzene	1.0	< 1.0	U
99-87-6	4-Isopropyltoluene	1.0	< 1.0	U
104-51-8	n-Butylbenzene	1.0	< 1.0	U
120-82-1	1,2,4-Trichlorobenzene	5.1	< 5.1	U
91-20-3	Naphthalene	5.1	< 5.1	U
87-61-6	1,2,3-Trichlorobenzene	5.1	< 5.1	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	131%
d8-Toluene	102%
Bromofluorobenzene	87.1%
d4-1,2-Dichlorobenzene	86.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: CD-M-2005
SAMPLE

Lab Sample ID: IK93S
LIMS ID: 05-14196
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Instrument/Analyst: FINN5/PAB
Date Analyzed: 08/26/05 20:19

Sample Amount: 5.40 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 21.7%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.9	< 0.9	U
74-83-9	Bromomethane	0.9	< 0.9	U
75-01-4	Vinyl Chloride	0.9	< 0.9	U
75-00-3	Chloroethane	0.9	< 0.9	U
75-09-2	Methylene Chloride	1.9	< 1.8	U
67-64-1	Acetone	4.6	< 4.6	U
75-15-0	Carbon Disulfide	0.9	< 0.9	U
75-35-4	1,1-Dichloroethene	0.9	< 0.9	U
75-34-3	1,1-Dichloroethane	0.9	< 0.9	U
156-60-5	trans-1,2-Dichloroethene	0.9	< 0.9	U
156-59-2	cis-1,2-Dichloroethene	0.9	< 0.9	U
67-66-3	Chloroform	0.9	< 0.9	U
107-06-2	1,2-Dichloroethane	0.9	< 0.9	U
78-93-3	2-Butanone	4.6	< 4.6	U
71-55-6	1,1,1-Trichloroethane	0.9	< 0.9	U
56-23-5	Carbon Tetrachloride	0.9	< 0.9	U
108-05-4	Vinyl Acetate	4.6	< 4.6	U
75-27-4	Bromodichloromethane	0.9	< 0.9	U
78-87-5	1,2-Dichloropropane	0.9	< 0.9	U
10061-01-5	cis-1,3-Dichloropropene	0.9	< 0.9	U
79-01-6	Trichloroethene	0.9	< 0.9	U
124-48-1	Dibromochloromethane	0.9	< 0.9	U
79-00-5	1,1,2-Trichloroethane	0.9	< 0.9	U
71-43-2	Benzene	0.9	< 0.9	U
10061-02-6	trans-1,3-Dichloropropene	0.9	< 0.9	U
110-75-8	2-Chloroethylvinylether	4.6	< 4.6	U
75-25-2	Bromoform	0.9	< 0.9	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	4.6	< 4.6	U
591-78-6	2-Hexanone	4.6	< 4.6	U
127-18-4	Tetrachloroethene	0.9	< 0.9	U
79-34-5	1,1,2,2-Tetrachloroethane	0.9	< 0.9	U
108-88-3	Toluene	0.9	< 0.9	U
108-90-7	Chlorobenzene	0.9	< 0.9	U
100-41-4	Ethylbenzene	0.9	< 0.9	U
100-42-5	Styrene	0.9	< 0.9	U
75-69-4	Trichlorofluoromethane	0.9	< 0.9	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	1.9	< 1.8	U
1330-20-7	m,p-Xylene	0.9	< 0.9	U
95-47-6	o-Xylene	0.9	< 0.9	U
95-50-1	1,2-Dichlorobenzene	0.9	< 0.9	U
541-73-1	1,3-Dichlorobenzene	0.9	< 0.9	U
106-46-7	1,4-Dichlorobenzene	0.9	< 0.9	U
107-02-8	Acrolein	46	< 46	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: CD-M-2005
SAMPLE

Lab Sample ID: IK93S
LIMS ID: 05-14196
Matrix: Sediment
Date Analyzed: 08/26/05 20:19

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	0.9	< 0.9	U
74-96-4	Bromoethane	1.9	< 1.8	U
107-13-1	Acrylonitrile	4.6	< 4.6	U
563-58-6	1,1-Dichloropropene	0.9	< 0.9	U
74-95-3	Dibromomethane	0.9	< 0.9	U
630-20-6	1,1,1,2-Tetrachloroethane	0.9	< 0.9	U
96-12-8	1,2-Dibromo-3-chloropropane	4.6	< 4.6	U
96-18-4	1,2,3-Trichloropropane	1.9	< 1.8	U
110-57-6	trans-1,4-Dichloro-2-butene	4.6	< 4.6	U
108-67-8	1,3,5-Trimethylbenzene	0.9	< 0.9	U
95-63-6	1,2,4-Trimethylbenzene	0.9	< 0.9	U
87-68-3	Hexachlorobutadiene	4.6	< 4.6	U
106-93-4	Ethylene Dibromide	0.9	< 0.9	U
74-97-5	Bromochloromethane	0.9	< 0.9	U
594-20-7	2,2-Dichloropropane	0.9	< 0.9	U
142-28-9	1,3-Dichloropropane	0.9	< 0.9	U
98-82-8	Isopropylbenzene	0.9	< 0.9	U
103-65-1	n-Propylbenzene	0.9	< 0.9	U
108-86-1	Bromobenzene	0.9	< 0.9	U
95-49-8	2-Chlorotoluene	0.9	< 0.9	U
106-43-4	4-Chlorotoluene	0.9	< 0.9	U
98-06-6	tert-Butylbenzene	0.9	< 0.9	U
135-98-8	sec-Butylbenzene	0.9	< 0.9	U
99-87-6	4-Isopropyltoluene	0.9	< 0.9	U
104-51-8	n-Butylbenzene	0.9	< 0.9	U
120-82-1	1,2,4-Trichlorobenzene	4.6	< 4.6	U
91-20-3	Naphthalene	4.6	< 4.6	U
87-61-6	1,2,3-Trichlorobenzene	4.6	< 4.6	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	123%
d8-Toluene	99.3%
Bromofluorobenzene	85.0%
d4-1,2-Dichlorobenzene	88.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: E-M-2005
SAMPLE

Lab Sample ID: IK93R
LIMS ID: 05-14195
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Instrument/Analyst: FINN5/PAB
Date Analyzed: 08/26/05 19:51

Sample Amount: 5.01 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 22.4%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	1.0	< 1.0	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	1.0	< 1.0	U
75-00-3	Chloroethane	1.0	< 1.0	U
75-09-2	Methylene Chloride	2.0	< 2.0	U
67-64-1	**Acetone**	**5.0**	**11**	
75-15-0	Carbon Disulfide	1.0	< 1.0	U
75-35-4	1,1-Dichloroethene	1.0	< 1.0	U
75-34-3	1,1-Dichloroethane	1.0	< 1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	< 1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	< 1.0	U
67-66-3	Chloroform	1.0	< 1.0	U
107-06-2	1,2-Dichloroethane	1.0	< 1.0	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	1.0	< 1.0	U
56-23-5	Carbon Tetrachloride	1.0	< 1.0	U
108-05-4	Vinyl Acetate	5.0	< 5.0	U
75-27-4	Bromodichloromethane	1.0	< 1.0	U
78-87-5	1,2-Dichloropropane	1.0	< 1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	< 1.0	U
79-01-6	Trichloroethene	1.0	< 1.0	U
124-48-1	Dibromochloromethane	1.0	< 1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	< 1.0	U
71-43-2	Benzene	1.0	< 1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	< 1.0	U
110-75-8	2-Chloroethylvinylether	5.0	< 5.0	U
75-25-2	Bromoform	1.0	< 1.0	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	1.0	< 1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
108-90-7	Chlorobenzene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
100-42-5	Styrene	1.0	< 1.0	U
75-69-4	Trichlorofluoromethane	1.0	< 1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	2.0	< 2.0	U
1330-20-7	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0	U
107-02-8	Acrolein	50	< 50	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: E-M-2005
SAMPLE

Lab Sample ID: IK93R
LIMS ID: 05-14195
Matrix: Sediment
Date Analyzed: 08/26/05 19:51

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	2.0	< 2.0	U
107-13-1	Acrylonitrile	5.0	< 5.0	U
563-58-6	1,1-Dichloropropene	1.0	< 1.0	U
74-95-3	Dibromomethane	1.0	< 1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	< 1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	< 5.0	U
96-18-4	1,2,3-Trichloropropane	2.0	< 2.0	U
110-57-6	trans-1,4-Dichloro-2-butene	5.0	< 5.0	U
108-67-8	1,3,5-Trimethylbenzene	1.0	< 1.0	U
95-63-6	1,2,4-Trimethylbenzene	1.0	< 1.0	U
87-68-3	Hexachlorobutadiene	5.0	< 5.0	U
106-93-4	Ethylene Dibromide	1.0	< 1.0	U
74-97-5	Bromochloromethane	1.0	< 1.0	U
594-20-7	2,2-Dichloropropane	1.0	< 1.0	U
142-28-9	1,3-Dichloropropane	1.0	< 1.0	U
98-82-8	Isopropylbenzene	1.0	< 1.0	U
103-65-1	n-Propylbenzene	1.0	< 1.0	U
108-86-1	Bromobenzene	1.0	< 1.0	U
95-49-8	2-Chlorotoluene	1.0	< 1.0	U
106-43-4	4-Chlorotoluene	1.0	< 1.0	U
98-06-6	tert-Butylbenzene	1.0	< 1.0	U
135-98-8	sec-Butylbenzene	1.0	< 1.0	U
99-87-6	4-Isopropyltoluene	1.0	< 1.0	U
104-51-8	n-Butylbenzene	1.0	< 1.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	< 5.0	U
91-20-3	Naphthalene	5.0	< 5.0	U
87-61-6	1,2,3-Trichlorobenzene	5.0	< 5.0	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	122%
d8-Toluene	98.6%
Bromofluorobenzene	85.5%
d4-1,2-Dichlorobenzene	89.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: F-1-M-2005
SAMPLE

Lab Sample ID: IK93P
LIMS ID: 05-14193
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Instrument/Analyst: FINN5/PAB
Date Analyzed: 08/26/05 18:54

Sample Amount: 5.34 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 19.3%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.9	< 0.9	U
74-83-9	Bromomethane	0.9	< 0.9	U
75-01-4	Vinyl Chloride	0.9	< 0.9	U
75-00-3	Chloroethane	0.9	< 0.9	U
75-09-2	Methylene Chloride	1.9	< 1.9	U
67-64-1	**Acetone**	**4.7**	**9.8**	
75-15-0	Carbon Disulfide	0.9	< 0.9	U
75-35-4	1,1-Dichloroethene	0.9	< 0.9	U
75-34-3	1,1-Dichloroethane	0.9	< 0.9	U
156-60-5	trans-1,2-Dichloroethene	0.9	< 0.9	U
156-59-2	cis-1,2-Dichloroethene	0.9	< 0.9	U
67-66-3	Chloroform	0.9	< 0.9	U
107-06-2	1,2-Dichloroethane	0.9	< 0.9	U
78-93-3	2-Butanone	4.7	< 4.7	U
71-55-6	1,1,1-Trichloroethane	0.9	< 0.9	U
56-23-5	Carbon Tetrachloride	0.9	< 0.9	U
108-05-4	Vinyl Acetate	4.7	< 4.7	U
75-27-4	Bromodichloromethane	0.9	< 0.9	U
78-87-5	1,2-Dichloropropane	0.9	< 0.9	U
10061-01-5	cis-1,3-Dichloropropene	0.9	< 0.9	U
79-01-6	Trichloroethene	0.9	< 0.9	U
124-48-1	Dibromochloromethane	0.9	< 0.9	U
79-00-5	1,1,2-Trichloroethane	0.9	< 0.9	U
71-43-2	Benzene	0.9	< 0.9	U
10061-02-6	trans-1,3-Dichloropropene	0.9	< 0.9	U
110-75-8	2-Chloroethylvinylether	4.7	< 4.7	U
75-25-2	Bromoform	0.9	< 0.9	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	4.7	< 4.7	U
591-78-6	2-Hexanone	4.7	< 4.7	U
127-18-4	Tetrachloroethene	0.9	< 0.9	U
79-34-5	1,1,2,2-Tetrachloroethane	0.9	< 0.9	U
108-88-3	Toluene	0.9	< 0.9	U
108-90-7	Chlorobenzene	0.9	< 0.9	U
100-41-4	Ethylbenzene	0.9	< 0.9	U
100-42-5	Styrene	0.9	< 0.9	U
75-69-4	Trichlorofluoromethane	0.9	< 0.9	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	1.9	< 1.9	U
1330-20-7	m,p-Xylene	0.9	< 0.9	U
95-47-6	o-Xylene	0.9	< 0.9	U
95-50-1	1,2-Dichlorobenzene	0.9	< 0.9	U
541-73-1	1,3-Dichlorobenzene	0.9	< 0.9	U
106-46-7	1,4-Dichlorobenzene	0.9	< 0.9	U
107-02-8	Acrolein	47	< 47	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: F-1-M-2005
SAMPLE

Lab Sample ID: IK93P
LIMS ID: 05-14193
Matrix: Sediment
Date Analyzed: 08/26/05 18:54

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	0.9	< 0.9	U
74-96-4	Bromoethane	1.9	< 1.9	U
107-13-1	Acrylonitrile	4.7	< 4.7	U
563-58-6	1,1-Dichloropropene	0.9	< 0.9	U
74-95-3	Dibromomethane	0.9	< 0.9	U
630-20-6	1,1,1,2-Tetrachloroethane	0.9	< 0.9	U
96-12-8	1,2-Dibromo-3-chloropropane	4.7	< 4.7	U
96-18-4	1,2,3-Trichloropropane	1.9	< 1.9	U
110-57-6	trans-1,4-Dichloro-2-butene	4.7	< 4.7	U
108-67-8	1,3,5-Trimethylbenzene	0.9	< 0.9	U
95-63-6	1,2,4-Trimethylbenzene	0.9	< 0.9	U
87-68-3	Hexachlorobutadiene	4.7	< 4.7	U
106-93-4	Ethylene Dibromide	0.9	< 0.9	U
74-97-5	Bromochloromethane	0.9	< 0.9	U
594-20-7	2,2-Dichloropropane	0.9	< 0.9	U
142-28-9	1,3-Dichloropropane	0.9	< 0.9	U
98-82-8	Isopropylbenzene	0.9	< 0.9	U
103-65-1	n-Propylbenzene	0.9	< 0.9	U
108-86-1	Bromobenzene	0.9	< 0.9	U
95-49-8	2-Chlorotoluene	0.9	< 0.9	U
106-43-4	4-Chlorotoluene	0.9	< 0.9	U
98-06-6	tert-Butylbenzene	0.9	< 0.9	U
135-98-8	sec-Butylbenzene	0.9	< 0.9	U
99-87-6	4-Isopropyltoluene	0.9	< 0.9	U
104-51-8	n-Butylbenzene	0.9	< 0.9	U
120-82-1	1,2,4-Trichlorobenzene	4.7	< 4.7	U
91-20-3	Naphthalene	4.7	< 4.7	U
87-61-6	1,2,3-Trichlorobenzene	4.7	< 4.7	U

Reported in μg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	121%
d8-Toluene	97.6%
Bromofluorobenzene	87.6%
d4-1,2-Dichlorobenzene	88.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: FD-1-M-2005
SAMPLE

Lab Sample ID: IK93Q
LIMS ID: 05-14194
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Instrument/Analyst: FINN5/PAB
Date Analyzed: 08/26/05 19:23

Sample Amount: 5.18 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 17.4%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	1.0	< 1.0	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	1.0	< 1.0	U
75-00-3	Chloroethane	1.0	< 1.0	U
75-09-2	Methylene Chloride	1.9	< 1.9	U
67-64-1	**Acetone**	**4.8**	**12**	
75-15-0	Carbon Disulfide	1.0	< 1.0	U
75-35-4	1,1-Dichloroethene	1.0	< 1.0	U
75-34-3	1,1-Dichloroethane	1.0	< 1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	< 1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	< 1.0	U
67-66-3	Chloroform	1.0	< 1.0	U
107-06-2	1,2-Dichloroethane	1.0	< 1.0	U
78-93-3	2-Butanone	4.8	< 4.8	U
71-55-6	1,1,1-Trichloroethane	1.0	< 1.0	U
56-23-5	Carbon Tetrachloride	1.0	< 1.0	U
108-05-4	Vinyl Acetate	4.8	< 4.8	U
75-27-4	Bromodichloromethane	1.0	< 1.0	U
78-87-5	1,2-Dichloropropane	1.0	< 1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	< 1.0	U
79-01-6	Trichloroethene	1.0	< 1.0	U
124-48-1	Dibromochloromethane	1.0	< 1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	< 1.0	U
71-43-2	Benzene	1.0	< 1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	< 1.0	U
110-75-8	2-Chloroethylvinylether	4.8	< 4.8	U
75-25-2	Bromoform	1.0	< 1.0	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	4.8	< 4.8	U
591-78-6	2-Hexanone	4.8	< 4.8	U
127-18-4	Tetrachloroethene	1.0	< 1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
108-90-7	Chlorobenzene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
100-42-5	Styrene	1.0	< 1.0	U
75-69-4	Trichlorofluoromethane	1.0	< 1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	1.9	< 1.9	U
1330-20-7	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0	U
107-02-8	Acrolein	48	< 48	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: FD-1-M-2005
SAMPLE

Lab Sample ID: IK93Q
LIMS ID: 05-14194
Matrix: Sediment
Date Analyzed: 08/26/05 19:23

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	1.9	< 1.9	U
107-13-1	Acrylonitrile	4.8	< 4.8	U
563-58-6	1,1-Dichloropropene	1.0	< 1.0	U
74-95-3	Dibromomethane	1.0	< 1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	< 1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	4.8	< 4.8	U
96-18-4	1,2,3-Trichloropropane	1.9	< 1.9	U
110-57-6	trans-1,4-Dichloro-2-butene	4.8	< 4.8	U
108-67-8	1,3,5-Trimethylbenzene	1.0	< 1.0	U
95-63-6	1,2,4-Trimethylbenzene	1.0	< 1.0	U
87-68-3	Hexachlorobutadiene	4.8	< 4.8	U
106-93-4	Ethylene Dibromide	1.0	< 1.0	U
74-97-5	Bromochloromethane	1.0	< 1.0	U
594-20-7	2,2-Dichloropropane	1.0	< 1.0	U
142-28-9	1,3-Dichloropropane	1.0	< 1.0	U
98-82-8	Isopropylbenzene	1.0	< 1.0	U
103-65-1	n-Propylbenzene	1.0	< 1.0	U
108-86-1	Bromobenzene	1.0	< 1.0	U
95-49-8	2-Chlorotoluene	1.0	< 1.0	U
106-43-4	4-Chlorotoluene	1.0	< 1.0	U
98-06-6	tert-Butylbenzene	1.0	< 1.0	U
135-98-8	sec-Butylbenzene	1.0	< 1.0	U
99-87-6	4-Isopropyltoluene	1.0	< 1.0	U
104-51-8	n-Butylbenzene	1.0	< 1.0	U
120-82-1	1,2,4-Trichlorobenzene	4.8	< 4.8	U
91-20-3	Naphthalene	4.8	< 4.8	U
87-61-6	1,2,3-Trichlorobenzene	4.8	< 4.8	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	121%
d8-Toluene	98.1%
Bromofluorobenzene	88.2%
d4-1,2-Dichlorobenzene	88.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: F-2-M-2005
SAMPLE

Lab Sample ID: IK930
LIMS ID: 05-14192
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Instrument/Analyst: FINN5/PAB
Date Analyzed: 08/26/05 18:26

Sample Amount: 5.45 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 18.8%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.9	< 0.9	U
74-83-9	Bromomethane	0.9	< 0.9	U
75-01-4	Vinyl Chloride	0.9	< 0.9	U
75-00-3	Chloroethane	0.9	< 0.9	U
75-09-2	Methylene Chloride	1.8	< 1.8	U
67-64-1	**Acetone**	**4.6**	**6.8**	
75-15-0	Carbon Disulfide	0.9	< 0.9	U
75-35-4	1,1-Dichloroethene	0.9	< 0.9	U
75-34-3	1,1-Dichloroethane	0.9	< 0.9	U
156-60-5	trans-1,2-Dichloroethene	0.9	< 0.9	U
156-59-2	cis-1,2-Dichloroethene	0.9	< 0.9	U
67-66-3	Chloroform	0.9	< 0.9	U
107-06-2	1,2-Dichloroethane	0.9	< 0.9	U
78-93-3	2-Butanone	4.6	< 4.6	U
71-55-6	1,1,1-Trichloroethane	0.9	< 0.9	U
56-23-5	Carbon Tetrachloride	0.9	< 0.9	U
108-05-4	Vinyl Acetate	4.6	< 4.6	U
75-27-4	Bromodichloromethane	0.9	< 0.9	U
78-87-5	1,2-Dichloropropane	0.9	< 0.9	U
10061-01-5	cis-1,3-Dichloropropene	0.9	< 0.9	U
79-01-6	Trichloroethene	0.9	< 0.9	U
124-48-1	Dibromochloromethane	0.9	< 0.9	U
79-00-5	1,1,2-Trichloroethane	0.9	< 0.9	U
71-43-2	Benzene	0.9	< 0.9	U
10061-02-6	trans-1,3-Dichloropropene	0.9	< 0.9	U
110-75-8	2-Chloroethylvinylether	4.6	< 4.6	U
75-25-2	Bromoform	0.9	< 0.9	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	4.6	< 4.6	U
591-78-6	2-Hexanone	4.6	< 4.6	U
127-18-4	Tetrachloroethene	0.9	< 0.9	U
79-34-5	1,1,2,2-Tetrachloroethane	0.9	< 0.9	U
108-88-3	Toluene	0.9	< 0.9	U
108-90-7	Chlorobenzene	0.9	< 0.9	U
100-41-4	Ethylbenzene	0.9	< 0.9	U
100-42-5	Styrene	0.9	< 0.9	U
75-69-4	Trichlorofluoromethane	0.9	< 0.9	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	1.8	< 1.8	U
1330-20-7	m,p-Xylene	0.9	< 0.9	U
95-47-6	o-Xylene	0.9	< 0.9	U
95-50-1	1,2-Dichlorobenzene	0.9	< 0.9	U
541-73-1	1,3-Dichlorobenzene	0.9	< 0.9	U
106-46-7	1,4-Dichlorobenzene	0.9	< 0.9	U
107-02-8	Acrolein	46	< 46	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: F-2-M-2005
SAMPLE

Lab Sample ID: IK93O
LIMS ID: 05-14192
Matrix: Sediment
Date Analyzed: 08/26/05 18:26

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	0.9	< 0.9	U
74-96-4	Bromoethane	1.8	< 1.8	U
107-13-1	Acrylonitrile	4.6	< 4.6	U
563-58-6	1,1-Dichloropropene	0.9	< 0.9	U
74-95-3	Dibromomethane	0.9	< 0.9	U
630-20-6	1,1,1,2-Tetrachloroethane	0.9	< 0.9	U
96-12-8	1,2-Dibromo-3-chloropropane	4.6	< 4.6	U
96-18-4	1,2,3-Trichloropropane	1.8	< 1.8	U
110-57-6	trans-1,4-Dichloro-2-butene	4.6	< 4.6	U
108-67-8	1,3,5-Trimethylbenzene	0.9	< 0.9	U
95-63-6	1,2,4-Trimethylbenzene	0.9	< 0.9	U
87-68-3	Hexachlorobutadiene	4.6	< 4.6	U
106-93-4	Ethylene Dibromide	0.9	< 0.9	U
74-97-5	Bromochloromethane	0.9	< 0.9	U
594-20-7	2,2-Dichloropropane	0.9	< 0.9	U
142-28-9	1,3-Dichloropropane	0.9	< 0.9	U
98-82-8	Isopropylbenzene	0.9	< 0.9	U
103-65-1	n-Propylbenzene	0.9	< 0.9	U
108-86-1	Bromobenzene	0.9	< 0.9	U
95-49-8	2-Chlorotoluene	0.9	< 0.9	U
106-43-4	4-Chlorotoluene	0.9	< 0.9	U
98-06-6	tert-Butylbenzene	0.9	< 0.9	U
135-98-8	sec-Butylbenzene	0.9	< 0.9	U
99-87-6	4-Isopropyltoluene	0.9	< 0.9	U
104-51-8	n-Butylbenzene	0.9	< 0.9	U
120-82-1	1,2,4-Trichlorobenzene	4.6	< 4.6	U
91-20-3	Naphthalene	4.6	< 4.6	U
87-61-6	1,2,3-Trichlorobenzene	4.6	< 4.6	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	123%
d8-Toluene	96.9%
Bromofluorobenzene	88.7%
d4-1,2-Dichlorobenzene	89.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: G-M-2005
SAMPLE

Lab Sample ID: IK93K
LIMS ID: 05-14188
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Instrument/Analyst: FINN5/PAB
Date Analyzed: 08/26/05 15:37

Sample Amount: 5.46 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 18.5%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.9	< 0.9	U
74-83-9	Bromomethane	0.9	< 0.9	U
75-01-4	Vinyl Chloride	0.9	< 0.9	U
75-00-3	Chloroethane	0.9	< 0.9	U
75-09-2	Methylene Chloride	1.8	< 1.8	U
67-64-1	**Acetone**	**4.6**	**8.8**	
75-15-0	Carbon Disulfide	0.9	< 0.9	U
75-35-4	1,1-Dichloroethene	0.9	< 0.9	U
75-34-3	1,1-Dichloroethane	0.9	< 0.9	U
156-60-5	trans-1,2-Dichloroethene	0.9	< 0.9	U
156-59-2	cis-1,2-Dichloroethene	0.9	< 0.9	U
67-66-3	Chloroform	0.9	< 0.9	U
107-06-2	1,2-Dichloroethane	0.9	< 0.9	U
78-93-3	2-Butanone	4.6	< 4.6	U
71-55-6	1,1,1-Trichloroethane	0.9	< 0.9	U
56-23-5	Carbon Tetrachloride	0.9	< 0.9	U
108-05-4	Vinyl Acetate	4.6	< 4.6	U
75-27-4	Bromodichloromethane	0.9	< 0.9	U
78-87-5	1,2-Dichloropropane	0.9	< 0.9	U
10061-01-5	cis-1,3-Dichloropropene	0.9	< 0.9	U
79-01-6	Trichloroethene	0.9	< 0.9	U
124-48-1	Dibromochloromethane	0.9	< 0.9	U
79-00-5	1,1,2-Trichloroethane	0.9	< 0.9	U
71-43-2	Benzene	0.9	< 0.9	U
10061-02-6	trans-1,3-Dichloropropene	0.9	< 0.9	U
110-75-8	2-Chloroethylvinylether	4.6	< 4.6	U
75-25-2	Bromoform	0.9	< 0.9	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	4.6	< 4.6	U
591-78-6	2-Hexanone	4.6	< 4.6	U
127-18-4	Tetrachloroethene	0.9	< 0.9	U
79-34-5	1,1,2,2-Tetrachloroethane	0.9	< 0.9	U
108-88-3	Toluene	0.9	< 0.9	U
108-90-7	Chlorobenzene	0.9	< 0.9	U
100-41-4	Ethylbenzene	0.9	< 0.9	U
100-42-5	Styrene	0.9	< 0.9	U
75-69-4	Trichlorofluoromethane	0.9	< 0.9	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	1.8	< 1.8	U
1330-20-7	m,p-Xylene	0.9	< 0.9	U
95-47-6	o-Xylene	0.9	< 0.9	U
95-50-1	1,2-Dichlorobenzene	0.9	< 0.9	U
541-73-1	1,3-Dichlorobenzene	0.9	< 0.9	U
106-46-7	1,4-Dichlorobenzene	0.9	< 0.9	U
107-02-8	Acrolein	46	< 46	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: G-M-2005
SAMPLE

Lab Sample ID: IK93K
LIMS ID: 05-14188
Matrix: Sediment
Date Analyzed: 08/26/05 15:37

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	0.9	< 0.9	U
74-96-4	Bromoethane	1.8	< 1.8	U
107-13-1	Acrylonitrile	4.6	< 4.6	U
563-58-6	1,1-Dichloropropene	0.9	< 0.9	U
74-95-3	Dibromomethane	0.9	< 0.9	U
630-20-6	1,1,1,2-Tetrachloroethane	0.9	< 0.9	U
96-12-8	1,2-Dibromo-3-chloropropane	4.6	< 4.6	U
96-18-4	1,2,3-Trichloropropane	1.8	< 1.8	U
110-57-6	trans-1,4-Dichloro-2-butene	4.6	< 4.6	U
108-67-8	1,3,5-Trimethylbenzene	0.9	< 0.9	U
95-63-6	1,2,4-Trimethylbenzene	0.9	< 0.9	U
87-68-3	Hexachlorobutadiene	4.6	< 4.6	U
106-93-4	Ethylene Dibromide	0.9	< 0.9	U
74-97-5	Bromochloromethane	0.9	< 0.9	U
594-20-7	2,2-Dichloropropane	0.9	< 0.9	U
142-28-9	1,3-Dichloropropane	0.9	< 0.9	U
98-82-8	Isopropylbenzene	0.9	< 0.9	U
103-65-1	n-Propylbenzene	0.9	< 0.9	U
108-86-1	Bromobenzene	0.9	< 0.9	U
95-49-8	2-Chlorotoluene	0.9	< 0.9	U
106-43-4	4-Chlorotoluene	0.9	< 0.9	U
98-06-6	tert-Butylbenzene	0.9	< 0.9	U
135-98-8	sec-Butylbenzene	0.9	< 0.9	U
99-87-6	4-Isopropyltoluene	0.9	< 0.9	U
104-51-8	n-Butylbenzene	0.9	< 0.9	U
120-82-1	1,2,4-Trichlorobenzene	4.6	< 4.6	U
91-20-3	Naphthalene	4.6	< 4.6	U
87-61-6	1,2,3-Trichlorobenzene	4.6	< 4.6	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	119%
d8-Toluene	98.0%
Bromofluorobenzene	87.7%
d4-1,2-Dichlorobenzene	89.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: HI-M-2005
SAMPLE

Lab Sample ID: IK93J
LIMS ID: 05-14187
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Instrument/Analyst: FINN5/PAB
Date Analyzed: 08/26/05 15:09

Sample Amount: 5.48 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 17.2%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.9	< 0.9	U
74-83-9	Bromomethane	0.9	< 0.9	U
75-01-4	Vinyl Chloride	0.9	< 0.9	U
75-00-3	Chloroethane	0.9	< 0.9	U
75-09-2	Methylene Chloride	1.8	< 1.8	U
67-64-1	**Acetone**	**4.6**	**10**	
75-15-0	Carbon Disulfide	0.9	< 0.9	U
75-35-4	1,1-Dichloroethene	0.9	< 0.9	U
75-34-3	1,1-Dichloroethane	0.9	< 0.9	U
156-60-5	trans-1,2-Dichloroethene	0.9	< 0.9	U
156-59-2	cis-1,2-Dichloroethene	0.9	< 0.9	U
67-66-3	Chloroform	0.9	< 0.9	U
107-06-2	1,2-Dichloroethane	0.9	< 0.9	U
78-93-3	2-Butanone	4.6	< 4.6	U
71-55-6	1,1,1-Trichloroethane	0.9	< 0.9	U
56-23-5	Carbon Tetrachloride	0.9	< 0.9	U
108-05-4	Vinyl Acetate	4.6	< 4.6	U
75-27-4	Bromodichloromethane	0.9	< 0.9	U
78-87-5	1,2-Dichloropropane	0.9	< 0.9	U
10061-01-5	cis-1,3-Dichloropropene	0.9	< 0.9	U
79-01-6	Trichloroethene	0.9	< 0.9	U
124-48-1	Dibromochloromethane	0.9	< 0.9	U
79-00-5	1,1,2-Trichloroethane	0.9	< 0.9	U
71-43-2	Benzene	0.9	< 0.9	U
10061-02-6	trans-1,3-Dichloropropene	0.9	< 0.9	U
110-75-8	2-Chloroethylvinylether	4.6	< 4.6	U
75-25-2	Bromoform	0.9	< 0.9	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	4.6	< 4.6	U
591-78-6	2-Hexanone	4.6	< 4.6	U
127-18-4	Tetrachloroethene	0.9	< 0.9	U
79-34-5	1,1,2,2-Tetrachloroethane	0.9	< 0.9	U
108-88-3	Toluene	0.9	< 0.9	U
108-90-7	Chlorobenzene	0.9	< 0.9	U
100-41-4	Ethylbenzene	0.9	< 0.9	U
100-42-5	Styrene	0.9	< 0.9	U
75-69-4	Trichlorofluoromethane	0.9	< 0.9	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	1.8	< 1.8	U
1330-20-7	m,p-Xylene	0.9	< 0.9	U
95-47-6	o-Xylene	0.9	< 0.9	U
95-50-1	1,2-Dichlorobenzene	0.9	< 0.9	U
541-73-1	1,3-Dichlorobenzene	0.9	< 0.9	U
106-46-7	1,4-Dichlorobenzene	0.9	< 0.9	U
107-02-8	Acrolein	46	< 46	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: HI-M-2005
SAMPLE

Lab Sample ID: IK93J
LIMS ID: 05-14187
Matrix: Sediment
Date Analyzed: 08/26/05 15:09

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	0.9	< 0.9	U
74-96-4	Bromoethane	1.8	< 1.8	U
107-13-1	Acrylonitrile	4.6	< 4.6	U
563-58-6	1,1-Dichloropropene	0.9	< 0.9	U
74-95-3	Dibromomethane	0.9	< 0.9	U
630-20-6	1,1,1,2-Tetrachloroethane	0.9	< 0.9	U
96-12-8	1,2-Dibromo-3-chloropropane	4.6	< 4.6	U
96-18-4	1,2,3-Trichloropropane	1.8	< 1.8	U
110-57-6	trans-1,4-Dichloro-2-butene	4.6	< 4.6	U
108-67-8	1,3,5-Trimethylbenzene	0.9	< 0.9	U
95-63-6	1,2,4-Trimethylbenzene	0.9	< 0.9	U
87-68-3	Hexachlorobutadiene	4.6	< 4.6	U
106-93-4	Ethylene Dibromide	0.9	< 0.9	U
74-97-5	Bromochloromethane	0.9	< 0.9	U
594-20-7	2,2-Dichloropropane	0.9	< 0.9	U
142-28-9	1,3-Dichloropropane	0.9	< 0.9	U
98-82-8	Isopropylbenzene	0.9	< 0.9	U
103-65-1	n-Propylbenzene	0.9	< 0.9	U
108-86-1	Bromobenzene	0.9	< 0.9	U
95-49-8	2-Chlorotoluene	0.9	< 0.9	U
106-43-4	4-Chlorotoluene	0.9	< 0.9	U
98-06-6	tert-Butylbenzene	0.9	< 0.9	U
135-98-8	sec-Butylbenzene	0.9	< 0.9	U
99-87-6	4-Isopropyltoluene	0.9	< 0.9	U
104-51-8	n-Butylbenzene	0.9	< 0.9	U
120-82-1	1,2,4-Trichlorobenzene	4.6	< 4.6	U
91-20-3	Naphthalene	4.6	< 4.6	U
87-61-6	1,2,3-Trichlorobenzene	4.6	< 4.6	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	120%
d8-Toluene	96.0%
Bromofluorobenzene	87.6%
d4-1,2-Dichlorobenzene	90.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: J-M-2005
SAMPLE

Lab Sample ID: IK93I
LIMS ID: 05-14186
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Instrument/Analyst: FINN5/PAB
Date Analyzed: 08/26/05 14:41

Sample Amount: 5.22 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 19.6%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	1.0	< 1.0	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	1.0	< 1.0	U
75-00-3	Chloroethane	1.0	< 1.0	U
75-09-2	Methylene Chloride	1.9	< 1.9	U
67-64-1	**Acetone**	**4.8**	**12**	
75-15-0	Carbon Disulfide	1.0	< 1.0	U
75-35-4	1,1-Dichloroethene	1.0	< 1.0	U
75-34-3	1,1-Dichloroethane	1.0	< 1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	< 1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	< 1.0	U
67-66-3	Chloroform	1.0	< 1.0	U
107-06-2	1,2-Dichloroethane	1.0	< 1.0	U
78-93-3	2-Butanone	4.8	< 4.8	U
71-55-6	1,1,1-Trichloroethane	1.0	< 1.0	U
56-23-5	Carbon Tetrachloride	1.0	< 1.0	U
108-05-4	Vinyl Acetate	4.8	< 4.8	U
75-27-4	Bromodichloromethane	1.0	< 1.0	U
78-87-5	1,2-Dichloropropane	1.0	< 1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	< 1.0	U
79-01-6	Trichloroethene	1.0	< 1.0	U
124-48-1	Dibromochloromethane	1.0	< 1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	< 1.0	U
71-43-2	Benzene	1.0	< 1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	< 1.0	U
110-75-8	2-Chloroethylvinylether	4.8	< 4.8	U
75-25-2	Bromoform	1.0	< 1.0	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	4.8	< 4.8	U
591-78-6	2-Hexanone	4.8	< 4.8	U
127-18-4	Tetrachloroethene	1.0	< 1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
108-90-7	Chlorobenzene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
100-42-5	Styrene	1.0	< 1.0	U
75-69-4	Trichlorofluoromethane	1.0	< 1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	1.9	< 1.9	U
1330-20-7	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0	U
107-02-8	Acrolein	48	< 48	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: J-M-2005
SAMPLE

Lab Sample ID: IK93I
LIMS ID: 05-14186
Matrix: Sediment
Date Analyzed: 08/26/05 14:41

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	1.9	< 1.9	U
107-13-1	Acrylonitrile	4.8	< 4.8	U
563-58-6	1,1-Dichloropropene	1.0	< 1.0	U
74-95-3	Dibromomethane	1.0	< 1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	< 1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	4.8	< 4.8	U
96-18-4	1,2,3-Trichloropropane	1.9	< 1.9	U
110-57-6	trans-1,4-Dichloro-2-butene	4.8	< 4.8	U
108-67-8	1,3,5-Trimethylbenzene	1.0	< 1.0	U
95-63-6	1,2,4-Trimethylbenzene	1.0	< 1.0	U
87-68-3	Hexachlorobutadiene	4.8	< 4.8	U
106-93-4	Ethylene Dibromide	1.0	< 1.0	U
74-97-5	Bromochloromethane	1.0	< 1.0	U
594-20-7	2,2-Dichloropropane	1.0	< 1.0	U
142-28-9	1,3-Dichloropropane	1.0	< 1.0	U
98-82-8	Isopropylbenzene	1.0	< 1.0	U
103-65-1	n-Propylbenzene	1.0	< 1.0	U
108-86-1	Bromobenzene	1.0	< 1.0	U
95-49-8	2-Chlorotoluene	1.0	< 1.0	U
106-43-4	4-Chlorotoluene	1.0	< 1.0	U
98-06-6	tert-Butylbenzene	1.0	< 1.0	U
135-98-8	sec-Butylbenzene	1.0	< 1.0	U
99-87-6	4-Isopropyltoluene	1.0	< 1.0	U
104-51-8	n-Butylbenzene	1.0	< 1.0	U
120-82-1	1,2,4-Trichlorobenzene	4.8	< 4.8	U
91-20-3	Naphthalene	4.8	< 4.8	U
87-61-6	1,2,3-Trichlorobenzene	4.8	< 4.8	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	119%
d8-Toluene	98.1%
Bromofluorobenzene	87.0%
d4-1,2-Dichlorobenzene	87.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: K-M-2005
SAMPLE

Lab Sample ID: IK93N
LIMS ID: 05-14191
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Instrument/Analyst: FINN5/PAB
Date Analyzed: 08/26/05 17:58

Sample Amount: 5.30 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 15.8%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.9	< 0.9	U
74-83-9	Bromomethane	0.9	< 0.9	U
75-01-4	Vinyl Chloride	0.9	< 0.9	U
75-00-3	Chloroethane	0.9	< 0.9	U
75-09-2	Methylene Chloride	1.9	< 1.9	U
67-64-1	Acetone	4.7	< 4.7	U
75-15-0	Carbon Disulfide	0.9	< 0.9	U
75-35-4	1,1-Dichloroethene	0.9	< 0.9	U
75-34-3	1,1-Dichloroethane	0.9	< 0.9	U
156-60-5	trans-1,2-Dichloroethene	0.9	< 0.9	U
156-59-2	cis-1,2-Dichloroethene	0.9	< 0.9	U
67-66-3	Chloroform	0.9	< 0.9	U
107-06-2	1,2-Dichloroethane	0.9	< 0.9	U
78-93-3	2-Butanone	4.7	< 4.7	U
71-55-6	1,1,1-Trichloroethane	0.9	< 0.9	U
56-23-5	Carbon Tetrachloride	0.9	< 0.9	U
108-05-4	Vinyl Acetate	4.7	< 4.7	U
75-27-4	Bromodichloromethane	0.9	< 0.9	U
78-87-5	1,2-Dichloropropane	0.9	< 0.9	U
10061-01-5	cis-1,3-Dichloropropene	0.9	< 0.9	U
79-01-6	Trichloroethene	0.9	< 0.9	U
124-48-1	Dibromochloromethane	0.9	< 0.9	U
79-00-5	1,1,2-Trichloroethane	0.9	< 0.9	U
71-43-2	Benzene	0.9	< 0.9	U
10061-02-6	trans-1,3-Dichloropropene	0.9	< 0.9	U
110-75-8	2-Chloroethylvinylether	4.7	< 4.7	U
75-25-2	Bromoform	0.9	< 0.9	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	4.7	< 4.7	U
591-78-6	2-Hexanone	4.7	< 4.7	U
127-18-4	Tetrachloroethene	0.9	< 0.9	U
79-34-5	1,1,2,2-Tetrachloroethane	0.9	< 0.9	U
108-88-3	Toluene	0.9	< 0.9	U
108-90-7	Chlorobenzene	0.9	< 0.9	U
100-41-4	Ethylbenzene	0.9	< 0.9	U
100-42-5	Styrene	0.9	< 0.9	U
75-69-4	Trichlorofluoromethane	0.9	< 0.9	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	1.9	< 1.9	U
1330-20-7	m,p-Xylene	0.9	< 0.9	U
95-47-6	o-Xylene	0.9	< 0.9	U
95-50-1	1,2-Dichlorobenzene	0.9	< 0.9	U
541-73-1	1,3-Dichlorobenzene	0.9	< 0.9	U
106-46-7	1,4-Dichlorobenzene	0.9	< 0.9	U
107-02-8	Acrolein	47	< 47	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: K-M-2005
SAMPLE

Lab Sample ID: IK93N
LIMS ID: 05-14191
Matrix: Sediment
Date Analyzed: 08/26/05 17:58

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	0.9	< 0.9	U
74-96-4	Bromoethane	1.9	< 1.9	U
107-13-1	Acrylonitrile	4.7	< 4.7	U
563-58-6	1,1-Dichloropropene	0.9	< 0.9	U
74-95-3	Dibromomethane	0.9	< 0.9	U
630-20-6	1,1,1,2-Tetrachloroethane	0.9	< 0.9	U
96-12-8	1,2-Dibromo-3-chloropropane	4.7	< 4.7	U
96-18-4	1,2,3-Trichloropropane	1.9	< 1.9	U
110-57-6	trans-1,4-Dichloro-2-butene	4.7	< 4.7	U
108-67-8	1,3,5-Trimethylbenzene	0.9	< 0.9	U
95-63-6	1,2,4-Trimethylbenzene	0.9	< 0.9	U
87-68-3	Hexachlorobutadiene	4.7	< 4.7	U
106-93-4	Ethylene Dibromide	0.9	< 0.9	U
74-97-5	Bromochloromethane	0.9	< 0.9	U
594-20-7	2,2-Dichloropropane	0.9	< 0.9	U
142-28-9	1,3-Dichloropropane	0.9	< 0.9	U
98-82-8	Isopropylbenzene	0.9	< 0.9	U
103-65-1	n-Propylbenzene	0.9	< 0.9	U
108-86-1	Bromobenzene	0.9	< 0.9	U
95-49-8	2-Chlorotoluene	0.9	< 0.9	U
106-43-4	4-Chlorotoluene	0.9	< 0.9	U
98-06-6	tert-Butylbenzene	0.9	< 0.9	U
135-98-8	sec-Butylbenzene	0.9	< 0.9	U
99-87-6	4-Isopropyltoluene	0.9	< 0.9	U
104-51-8	n-Butylbenzene	0.9	< 0.9	U
120-82-1	1,2,4-Trichlorobenzene	4.7	< 4.7	U
91-20-3	Naphthalene	4.7	< 4.7	U
87-61-6	1,2,3-Trichlorobenzene	4.7	< 4.7	U

Reported in μg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	116%
d8-Toluene	98.7%
Bromofluorobenzene	88.3%
d4-1,2-Dichlorobenzene	89.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: L-M-2005
SAMPLE

Lab Sample ID: IK93H
LIMS ID: 05-14185
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Instrument/Analyst: FINN5/PAB
Date Analyzed: 08/26/05 14:13

Sample Amount: 5.06 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 20.3%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	1.0	< 1.0	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	1.0	< 1.0	U
75-00-3	Chloroethane	1.0	< 1.0	U
75-09-2	Methylene Chloride	2.0	< 2.0	U
67-64-1	**Acetone**	**4.9**	**12**	
75-15-0	Carbon Disulfide	1.0	< 1.0	U
75-35-4	1,1-Dichloroethene	1.0	< 1.0	U
75-34-3	1,1-Dichloroethane	1.0	< 1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	< 1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	< 1.0	U
67-66-3	Chloroform	1.0	< 1.0	U
107-06-2	1,2-Dichloroethane	1.0	< 1.0	U
78-93-3	2-Butanone	4.9	< 4.9	U
71-55-6	1,1,1-Trichloroethane	1.0	< 1.0	U
56-23-5	Carbon Tetrachloride	1.0	< 1.0	U
108-05-4	Vinyl Acetate	4.9	< 4.9	U
75-27-4	Bromodichloromethane	1.0	< 1.0	U
78-87-5	1,2-Dichloropropane	1.0	< 1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	< 1.0	U
79-01-6	Trichloroethene	1.0	< 1.0	U
124-48-1	Dibromochloromethane	1.0	< 1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	< 1.0	U
71-43-2	Benzene	1.0	< 1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	< 1.0	U
110-75-8	2-Chloroethylvinylether	4.9	< 4.9	U
75-25-2	Bromoform	1.0	< 1.0	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	4.9	< 4.9	U
591-78-6	2-Hexanone	4.9	< 4.9	U
127-18-4	Tetrachloroethene	1.0	< 1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
108-90-7	Chlorobenzene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
100-42-5	Styrene	1.0	< 1.0	U
75-69-4	Trichlorofluoromethane	1.0	< 1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	2.0	< 2.0	U
1330-20-7	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0	U
107-02-8	Acrolein	49	< 49	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: L-M-2005
SAMPLE

Lab Sample ID: IK93H
LIMS ID: 05-14185
Matrix: Sediment
Date Analyzed: 08/26/05 14:13

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	2.0	< 2.0	U
107-13-1	Acrylonitrile	4.9	< 4.9	U
563-58-6	1,1-Dichloropropene	1.0	< 1.0	U
74-95-3	Dibromomethane	1.0	< 1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	< 1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	4.9	< 4.9	U
96-18-4	1,2,3-Trichloropropane	2.0	< 2.0	U
110-57-6	trans-1,4-Dichloro-2-butene	4.9	< 4.9	U
108-67-8	1,3,5-Trimethylbenzene	1.0	< 1.0	U
95-63-6	1,2,4-Trimethylbenzene	1.0	< 1.0	U
87-68-3	Hexachlorobutadiene	4.9	< 4.9	U
106-93-4	Ethylene Dibromide	1.0	< 1.0	U
74-97-5	Bromochloromethane	1.0	< 1.0	U
594-20-7	2,2-Dichloropropane	1.0	< 1.0	U
142-28-9	1,3-Dichloropropane	1.0	< 1.0	U
98-82-8	Isopropylbenzene	1.0	< 1.0	U
103-65-1	n-Propylbenzene	1.0	< 1.0	U
108-86-1	Bromobenzene	1.0	< 1.0	U
95-49-8	2-Chlorotoluene	1.0	< 1.0	U
106-43-4	4-Chlorotoluene	1.0	< 1.0	U
98-06-6	tert-Butylbenzene	1.0	< 1.0	U
135-98-8	sec-Butylbenzene	1.0	< 1.0	U
99-87-6	4-Isopropyltoluene	1.0	< 1.0	U
104-51-8	n-Butylbenzene	1.0	< 1.0	U
120-82-1	1,2,4-Trichlorobenzene	4.9	< 4.9	U
91-20-3	Naphthalene	4.9	< 4.9	U
87-61-6	1,2,3-Trichlorobenzene	4.9	< 4.9	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	115%
d8-Toluene	97.9%
Bromofluorobenzene	87.9%
d4-1,2-Dichlorobenzene	90.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: M-M-2005
SAMPLE

Lab Sample ID: IK93F
LIMS ID: 05-14183
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Instrument/Analyst: FINN5/PAB
Date Analyzed: 08/26/05 13:16

Sample Amount: 5.30 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 15.4%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.9	< 0.9	U
74-83-9	Bromomethane	0.9	< 0.9	U
75-01-4	Vinyl Chloride	0.9	< 0.9	U
75-00-3	Chloroethane	0.9	< 0.9	U
75-09-2	**Methylene Chloride**	**1.9**	**3.5**	
67-64-1	**Acetone**	**4.7**	**16**	
75-15-0	Carbon Disulfide	0.9	< 0.9	U
75-35-4	1,1-Dichloroethene	0.9	< 0.9	U
75-34-3	1,1-Dichloroethane	0.9	< 0.9	U
156-60-5	trans-1,2-Dichloroethene	0.9	< 0.9	U
156-59-2	cis-1,2-Dichloroethene	0.9	< 0.9	U
67-66-3	Chloroform	0.9	< 0.9	U
107-06-2	1,2-Dichloroethane	0.9	< 0.9	U
78-93-3	2-Butanone	4.7	< 4.7	U
71-55-6	1,1,1-Trichloroethane	0.9	< 0.9	U
56-23-5	Carbon Tetrachloride	0.9	< 0.9	U
108-05-4	Vinyl Acetate	4.7	< 4.7	U
75-27-4	Bromodichloromethane	0.9	< 0.9	U
78-87-5	1,2-Dichloropropane	0.9	< 0.9	U
10061-01-5	cis-1,3-Dichloropropene	0.9	< 0.9	U
79-01-6	Trichloroethene	0.9	< 0.9	U
124-48-1	Dibromochloromethane	0.9	< 0.9	U
79-00-5	1,1,2-Trichloroethane	0.9	< 0.9	U
71-43-2	Benzene	0.9	< 0.9	U
10061-02-6	trans-1,3-Dichloropropene	0.9	< 0.9	U
110-75-8	2-Chloroethylvinylether	4.7	< 4.7	U
75-25-2	Bromoform	0.9	< 0.9	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	4.7	< 4.7	U
591-78-6	2-Hexanone	4.7	< 4.7	U
127-18-4	Tetrachloroethene	0.9	< 0.9	U
79-34-5	1,1,2,2-Tetrachloroethane	0.9	< 0.9	U
108-88-3	Toluene	0.9	< 0.9	U
108-90-7	Chlorobenzene	0.9	< 0.9	U
100-41-4	Ethylbenzene	0.9	< 0.9	U
100-42-5	Styrene	0.9	< 0.9	U
75-69-4	Trichlorofluoromethane	0.9	< 0.9	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	1.9	< 1.9	U
1330-20-7	m,p-Xylene	0.9	< 0.9	U
95-47-6	o-Xylene	0.9	< 0.9	U
95-50-1	1,2-Dichlorobenzene	0.9	< 0.9	U
541-73-1	1,3-Dichlorobenzene	0.9	< 0.9	U
106-46-7	1,4-Dichlorobenzene	0.9	< 0.9	U
107-02-8	Acrolein	47	< 47	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: M-M-2005
SAMPLE

Lab Sample ID: IK93F
LIMS ID: 05-14183
Matrix: Sediment
Date Analyzed: 08/26/05 13:16

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	0.9	< 0.9	U
74-96-4	Bromoethane	1.9	< 1.9	U
107-13-1	Acrylonitrile	4.7	< 4.7	U
563-58-6	1,1-Dichloropropene	0.9	< 0.9	U
74-95-3	Dibromomethane	0.9	< 0.9	U
630-20-6	1,1,1,2-Tetrachloroethane	0.9	< 0.9	U
96-12-8	1,2-Dibromo-3-chloropropane	4.7	< 4.7	U
96-18-4	1,2,3-Trichloropropane	1.9	< 1.9	U
110-57-6	trans-1,4-Dichloro-2-butene	4.7	< 4.7	U
108-67-8	1,3,5-Trimethylbenzene	0.9	< 0.9	U
95-63-6	1,2,4-Trimethylbenzene	0.9	< 0.9	U
87-68-3	Hexachlorobutadiene	4.7	< 4.7	U
106-93-4	Ethylene Dibromide	0.9	< 0.9	U
74-97-5	Bromochloromethane	0.9	< 0.9	U
594-20-7	2,2-Dichloropropane	0.9	< 0.9	U
142-28-9	1,3-Dichloropropane	0.9	< 0.9	U
98-82-8	Isopropylbenzene	0.9	< 0.9	U
103-65-1	n-Propylbenzene	0.9	< 0.9	U
108-86-1	Bromobenzene	0.9	< 0.9	U
95-49-8	2-Chlorotoluene	0.9	< 0.9	U
106-43-4	4-Chlorotoluene	0.9	< 0.9	U
98-06-6	tert-Butylbenzene	0.9	< 0.9	U
135-98-8	sec-Butylbenzene	0.9	< 0.9	U
99-87-6	4-Isopropyltoluene	0.9	< 0.9	U
104-51-8	n-Butylbenzene	0.9	< 0.9	U
120-82-1	1,2,4-Trichlorobenzene	4.7	< 4.7	U
91-20-3	Naphthalene	4.7	< 4.7	U
87-61-6	1,2,3-Trichlorobenzene	4.7	< 4.7	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	118%
d8-Toluene	96.6%
Bromofluorobenzene	88.2%
d4-1,2-Dichlorobenzene	90.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: MD-M-2005
SAMPLE

Lab Sample ID: IK93G
LIMS ID: 05-14184
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Instrument/Analyst: FINN5/PAB
Date Analyzed: 08/26/05 13:44

Sample Amount: 5.13 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 15.9%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	1.0	< 1.0	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	1.0	< 1.0	U
75-00-3	Chloroethane	1.0	< 1.0	U
75-09-2	**Methylene Chloride**	**1.9**	**4.7**	
67-64-1	**Acetone**	**4.9**	**20**	
75-15-0	Carbon Disulfide	1.0	< 1.0	U
75-35-4	1,1-Dichloroethene	1.0	< 1.0	U
75-34-3	1,1-Dichloroethane	1.0	< 1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	< 1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	< 1.0	U
67-66-3	Chloroform	1.0	< 1.0	U
107-06-2	1,2-Dichloroethane	1.0	< 1.0	U
78-93-3	2-Butanone	4.9	< 4.9	U
71-55-6	1,1,1-Trichloroethane	1.0	< 1.0	U
56-23-5	Carbon Tetrachloride	1.0	< 1.0	U
108-05-4	Vinyl Acetate	4.9	< 4.9	U
75-27-4	Bromodichloromethane	1.0	< 1.0	U
78-87-5	1,2-Dichloropropane	1.0	< 1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	< 1.0	U
79-01-6	Trichloroethene	1.0	< 1.0	U
124-48-1	Dibromochloromethane	1.0	< 1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	< 1.0	U
71-43-2	Benzene	1.0	< 1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	< 1.0	U
110-75-8	2-Chloroethylvinylether	4.9	< 4.9	U
75-25-2	Bromoform	1.0	< 1.0	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	4.9	< 4.9	U
591-78-6	2-Hexanone	4.9	< 4.9	U
127-18-4	Tetrachloroethene	1.0	< 1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
108-90-7	Chlorobenzene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
100-42-5	Styrene	1.0	< 1.0	U
75-69-4	Trichlorofluoromethane	1.0	< 1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	1.9	< 2.0	U
1330-20-7	**m,p-Xylene**	**1.0**	**1.2**	
95-47-6	o-Xylene	1.0	< 1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0	U
107-02-8	Acrolein	49	< 49	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: MD-M-2005
SAMPLE

Lab Sample ID: IK93G
LIMS ID: 05-14184
Matrix: Sediment
Date Analyzed: 08/26/05 13:44

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	1.9	< 2.0	U
107-13-1	Acrylonitrile	4.9	< 4.9	U
563-58-6	1,1-Dichloropropene	1.0	< 1.0	U
74-95-3	Dibromomethane	1.0	< 1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	< 1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	4.9	< 4.9	U
96-18-4	1,2,3-Trichloropropane	1.9	< 2.0	U
110-57-6	trans-1,4-Dichloro-2-butene	4.9	< 4.9	U
108-67-8	1,3,5-Trimethylbenzene	1.0	< 1.0	U
95-63-6	1,2,4-Trimethylbenzene	1.0	< 1.0	U
87-68-3	Hexachlorobutadiene	4.9	< 4.9	U
106-93-4	Ethylene Dibromide	1.0	< 1.0	U
74-97-5	Bromochloromethane	1.0	< 1.0	U
594-20-7	2,2-Dichloropropane	1.0	< 1.0	U
142-28-9	1,3-Dichloropropane	1.0	< 1.0	U
98-82-8	Isopropylbenzene	1.0	< 1.0	U
103-65-1	n-Propylbenzene	1.0	< 1.0	U
108-86-1	Bromobenzene	1.0	< 1.0	U
95-49-8	2-Chlorotoluene	1.0	< 1.0	U
106-43-4	4-Chlorotoluene	1.0	< 1.0	U
98-06-6	tert-Butylbenzene	1.0	< 1.0	U
135-98-8	sec-Butylbenzene	1.0	< 1.0	U
99-87-6	4-Isopropyltoluene	1.0	< 1.0	U
104-51-8	n-Butylbenzene	1.0	< 1.0	U
120-82-1	1,2,4-Trichlorobenzene	4.9	< 4.9	U
91-20-3	Naphthalene	4.9	< 4.9	U
87-61-6	1,2,3-Trichlorobenzene	4.9	< 4.9	U

Reported in μg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	119%
d8-Toluene	96.5%
Bromofluorobenzene	86.9%
d4-1,2-Dichlorobenzene	89.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: N-M-2005
SAMPLE

Lab Sample ID: IK93M
LIMS ID: 05-14190
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Instrument/Analyst: FINN5/PAB
Date Analyzed: 08/26/05 16:34

Sample Amount: 4.64 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 20.1%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	1.1	< 1.1	U
74-83-9	Bromomethane	1.1	< 1.1	U
75-01-4	Vinyl Chloride	1.1	< 1.1	U
75-00-3	Chloroethane	1.1	< 1.1	U
75-09-2	Methylene Chloride	2.2	< 2.2	U
67-64-1	Acetone	5.4	< 5.4	U
75-15-0	Carbon Disulfide	1.1	< 1.1	U
75-35-4	1,1-Dichloroethene	1.1	< 1.1	U
75-34-3	1,1-Dichloroethane	1.1	< 1.1	U
156-60-5	trans-1,2-Dichloroethene	1.1	< 1.1	U
156-59-2	cis-1,2-Dichloroethene	1.1	< 1.1	U
67-66-3	Chloroform	1.1	< 1.1	U
107-06-2	1,2-Dichloroethane	1.1	< 1.1	U
78-93-3	2-Butanone	5.4	< 5.4	U
71-55-6	1,1,1-Trichloroethane	1.1	< 1.1	U
56-23-5	Carbon Tetrachloride	1.1	< 1.1	U
108-05-4	Vinyl Acetate	5.4	< 5.4	U
75-27-4	Bromodichloromethane	1.1	< 1.1	U
78-87-5	1,2-Dichloropropane	1.1	< 1.1	U
10061-01-5	cis-1,3-Dichloropropene	1.1	< 1.1	U
79-01-6	Trichloroethene	1.1	< 1.1	U
124-48-1	Dibromochloromethane	1.1	< 1.1	U
79-00-5	1,1,2-Trichloroethane	1.1	< 1.1	U
71-43-2	Benzene	1.1	< 1.1	U
10061-02-6	trans-1,3-Dichloropropene	1.1	< 1.1	U
110-75-8	2-Chloroethylvinylether	5.4	< 5.4	U
75-25-2	Bromoform	1.1	< 1.1	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.4	< 5.4	U
591-78-6	2-Hexanone	5.4	< 5.4	U
127-18-4	Tetrachloroethene	1.1	< 1.1	U
79-34-5	1,1,2,2-Tetrachloroethane	1.1	< 1.1	U
108-88-3	Toluene	1.1	< 1.1	U
108-90-7	Chlorobenzene	1.1	< 1.1	U
100-41-4	Ethylbenzene	1.1	< 1.1	U
100-42-5	Styrene	1.1	< 1.1	U
75-69-4	Trichlorofluoromethane	1.1	< 1.1	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	2.2	< 2.2	U
1330-20-7	m,p-Xylene	1.1	< 1.1	U
95-47-6	o-Xylene	1.1	< 1.1	U
95-50-1	1,2-Dichlorobenzene	1.1	< 1.1	U
541-73-1	1,3-Dichlorobenzene	1.1	< 1.1	U
106-46-7	1,4-Dichlorobenzene	1.1	< 1.1	U
107-02-8	Acrolein	54	< 54	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: N-M-2005
SAMPLE

Lab Sample ID: IK93M
LIMS ID: 05-14190
Matrix: Sediment
Date Analyzed: 08/26/05 16:34

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.1	< 1.1	U
74-96-4	Bromoethane	2.2	< 2.2	U
107-13-1	Acrylonitrile	5.4	< 5.4	U
563-58-6	1,1-Dichloropropene	1.1	< 1.1	U
74-95-3	Dibromomethane	1.1	< 1.1	U
630-20-6	1,1,1,2-Tetrachloroethane	1.1	< 1.1	U
96-12-8	1,2-Dibromo-3-chloropropane	5.4	< 5.4	U
96-18-4	1,2,3-Trichloropropane	2.2	< 2.2	U
110-57-6	trans-1,4-Dichloro-2-butene	5.4	< 5.4	U
108-67-8	1,3,5-Trimethylbenzene	1.1	< 1.1	U
95-63-6	1,2,4-Trimethylbenzene	1.1	< 1.1	U
87-68-3	Hexachlorobutadiene	5.4	< 5.4	U
106-93-4	Ethylene Dibromide	1.1	< 1.1	U
74-97-5	Bromochloromethane	1.1	< 1.1	U
594-20-7	2,2-Dichloropropane	1.1	< 1.1	U
142-28-9	1,3-Dichloropropane	1.1	< 1.1	U
98-82-8	Isopropylbenzene	1.1	< 1.1	U
103-65-1	n-Propylbenzene	1.1	< 1.1	U
108-86-1	Bromobenzene	1.1	< 1.1	U
95-49-8	2-Chlorotoluene	1.1	< 1.1	U
106-43-4	4-Chlorotoluene	1.1	< 1.1	U
98-06-6	tert-Butylbenzene	1.1	< 1.1	U
135-98-8	sec-Butylbenzene	1.1	< 1.1	U
99-87-6	4-Isopropyltoluene	1.1	< 1.1	U
104-51-8	n-Butylbenzene	1.1	< 1.1	U
120-82-1	1,2,4-Trichlorobenzene	5.4	< 5.4	U
91-20-3	Naphthalene	5.4	< 5.4	U
87-61-6	1,2,3-Trichlorobenzene	5.4	< 5.4	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	122%
d8-Toluene	99.4%
Bromofluorobenzene	92.9%
d4-1,2-Dichlorobenzene	90.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: O-M-2005
SAMPLE

Lab Sample ID: IK93E
LIMS ID: 05-14182
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Instrument/Analyst: FINN5/PAB
Date Analyzed: 08/24/05 20:25

Sample Amount: 4.89 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 18.1%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	1.0	< 1.0	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	1.0	< 1.0	U
75-00-3	Chloroethane	1.0	< 1.0	U
75-09-2	Methylene Chloride	2.0	< 2.0	U
67-64-1	Acetone	5.1	< 5.1	U
75-15-0	Carbon Disulfide	1.0	< 1.0	U
75-35-4	1,1-Dichloroethene	1.0	< 1.0	U
75-34-3	1,1-Dichloroethane	1.0	< 1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	< 1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	< 1.0	U
67-66-3	Chloroform	1.0	< 1.0	U
107-06-2	1,2-Dichloroethane	1.0	< 1.0	U
78-93-3	2-Butanone	5.1	< 5.1	U
71-55-6	1,1,1-Trichloroethane	1.0	< 1.0	U
56-23-5	Carbon Tetrachloride	1.0	< 1.0	U
108-05-4	Vinyl Acetate	5.1	< 5.1	U
75-27-4	Bromodichloromethane	1.0	< 1.0	U
78-87-5	1,2-Dichloropropane	1.0	< 1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	< 1.0	U
79-01-6	Trichloroethene	1.0	< 1.0	U
124-48-1	Dibromochloromethane	1.0	< 1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	< 1.0	U
71-43-2	Benzene	1.0	< 1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	< 1.0	U
110-75-8	2-Chloroethylvinylether	5.1	< 5.1	U
75-25-2	Bromoform	1.0	< 1.0	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.1	< 5.1	U
591-78-6	2-Hexanone	5.1	< 5.1	U
127-18-4	**Tetrachloroethene**	**1.0**	**3.8**	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
108-90-7	Chlorobenzene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
100-42-5	Styrene	1.0	< 1.0	U
75-69-4	Trichlorofluoromethane	1.0	< 1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	2.0	< 2.0	U
1330-20-7	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0	U
107-02-8	Acrolein	51	< 51	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: O-M-2005
SAMPLE

Lab Sample ID: IK93E
LIMS ID: 05-14182
Matrix: Sediment
Date Analyzed: 08/24/05 20:25

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	2.0	< 2.0	U
107-13-1	Acrylonitrile	5.1	< 5.1	U
563-58-6	1,1-Dichloropropene	1.0	< 1.0	U
74-95-3	Dibromomethane	1.0	< 1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	< 1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.1	< 5.1	U
96-18-4	1,2,3-Trichloropropane	2.0	< 2.0	U
110-57-6	trans-1,4-Dichloro-2-butene	5.1	< 5.1	U
108-67-8	1,3,5-Trimethylbenzene	1.0	< 1.0	U
95-63-6	1,2,4-Trimethylbenzene	1.0	< 1.0	U
87-68-3	Hexachlorobutadiene	5.1	< 5.1	U
106-93-4	Ethylene Dibromide	1.0	< 1.0	U
74-97-5	Bromochloromethane	1.0	< 1.0	U
594-20-7	2,2-Dichloropropane	1.0	< 1.0	U
142-28-9	1,3-Dichloropropane	1.0	< 1.0	U
98-82-8	Isopropylbenzene	1.0	< 1.0	U
103-65-1	n-Propylbenzene	1.0	< 1.0	U
108-86-1	Bromobenzene	1.0	< 1.0	U
95-49-8	2-Chlorotoluene	1.0	< 1.0	U
106-43-4	4-Chlorotoluene	1.0	< 1.0	U
98-06-6	tert-Butylbenzene	1.0	< 1.0	U
135-98-8	sec-Butylbenzene	1.0	< 1.0	U
99-87-6	4-Isopropyltoluene	1.0	< 1.0	U
104-51-8	n-Butylbenzene	1.0	< 1.0	U
120-82-1	1,2,4-Trichlorobenzene	5.1	< 5.1	U
91-20-3	Naphthalene	5.1	< 5.1	U
87-61-6	1,2,3-Trichlorobenzene	5.1	< 5.1	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	129%
d8-Toluene	101%
Bromofluorobenzene	99.5%
d4-1,2-Dichlorobenzene	91.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: P-M-2005
SAMPLE

Lab Sample ID: IK93D
LIMS ID: 05-14181
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Instrument/Analyst: FINN5/PAB
Date Analyzed: 08/26/05 12:48

Sample Amount: 4.18 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 21.1%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	1.2	< 1.2	U
74-83-9	Bromomethane	1.2	< 1.2	U
75-01-4	Vinyl Chloride	1.2	< 1.2	U
75-00-3	Chloroethane	1.2	< 1.2	U
75-09-2	Methylene Chloride	2.4	< 2.4	U
67-64-1	Acetone	6.0	< 6.0	U
75-15-0	Carbon Disulfide	1.2	< 1.2	U
75-35-4	1,1-Dichloroethene	1.2	< 1.2	U
75-34-3	1,1-Dichloroethane	1.2	< 1.2	U
156-60-5	trans-1,2-Dichloroethene	1.2	< 1.2	U
156-59-2	cis-1,2-Dichloroethene	1.2	< 1.2	U
67-66-3	Chloroform	1.2	< 1.2	U
107-06-2	1,2-Dichloroethane	1.2	< 1.2	U
78-93-3	2-Butanone	6.0	< 6.0	U
71-55-6	1,1,1-Trichloroethane	1.2	< 1.2	U
56-23-5	Carbon Tetrachloride	1.2	< 1.2	U
108-05-4	Vinyl Acetate	6.0	< 6.0	U
75-27-4	Bromodichloromethane	1.2	< 1.2	U
78-87-5	1,2-Dichloropropane	1.2	< 1.2	U
10061-01-5	cis-1,3-Dichloropropene	1.2	< 1.2	U
79-01-6	Trichloroethene	1.2	< 1.2	U
124-48-1	Dibromochloromethane	1.2	< 1.2	U
79-00-5	1,1,2-Trichloroethane	1.2	< 1.2	U
71-43-2	Benzene	1.2	< 1.2	U
10061-02-6	trans-1,3-Dichloropropene	1.2	< 1.2	U
110-75-8	2-Chloroethylvinylether	6.0	< 6.0	U
75-25-2	Bromoform	1.2	< 1.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	6.0	< 6.0	U
591-78-6	2-Hexanone	6.0	< 6.0	U
127-18-4	Tetrachloroethene	1.2	< 1.2	U
79-34-5	1,1,2,2-Tetrachloroethane	1.2	< 1.2	U
108-88-3	Toluene	1.2	< 1.2	U
108-90-7	Chlorobenzene	1.2	< 1.2	U
100-41-4	Ethylbenzene	1.2	< 1.2	U
100-42-5	Styrene	1.2	< 1.2	U
75-69-4	Trichlorofluoromethane	1.2	< 1.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	2.4	< 2.4	U
1330-20-7	m,p-Xylene	1.2	< 1.2	U
95-47-6	o-Xylene	1.2	< 1.2	U
95-50-1	1,2-Dichlorobenzene	1.2	< 1.2	U
541-73-1	1,3-Dichlorobenzene	1.2	< 1.2	U
106-46-7	1,4-Dichlorobenzene	1.2	< 1.2	U
107-02-8	Acrolein	60	< 60	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: P-M-2005
SAMPLE

Lab Sample ID: IK93D
LIMS ID: 05-14181
Matrix: Sediment
Date Analyzed: 08/26/05 12:48

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.2	< 1.2	U
74-96-4	Bromoethane	2.4	< 2.4	U
107-13-1	Acrylonitrile	6.0	< 6.0	U
563-58-6	1,1-Dichloropropene	1.2	< 1.2	U
74-95-3	Dibromomethane	1.2	< 1.2	U
630-20-6	1,1,1,2-Tetrachloroethane	1.2	< 1.2	U
96-12-8	1,2-Dibromo-3-chloropropane	6.0	< 6.0	U
96-18-4	1,2,3-Trichloropropane	2.4	< 2.4	U
110-57-6	trans-1,4-Dichloro-2-butene	6.0	< 6.0	U
108-67-8	1,3,5-Trimethylbenzene	1.2	< 1.2	U
95-63-6	1,2,4-Trimethylbenzene	1.2	< 1.2	U
87-68-3	Hexachlorobutadiene	6.0	< 6.0	U
106-93-4	Ethylene Dibromide	1.2	< 1.2	U
74-97-5	Bromochloromethane	1.2	< 1.2	U
594-20-7	2,2-Dichloropropane	1.2	< 1.2	U
142-28-9	1,3-Dichloropropane	1.2	< 1.2	U
98-82-8	Isopropylbenzene	1.2	< 1.2	U
103-65-1	n-Propylbenzene	1.2	< 1.2	U
108-86-1	Bromobenzene	1.2	< 1.2	U
95-49-8	2-Chlorotoluene	1.2	< 1.2	U
106-43-4	4-Chlorotoluene	1.2	< 1.2	U
98-06-6	tert-Butylbenzene	1.2	< 1.2	U
135-98-8	sec-Butylbenzene	1.2	< 1.2	U
99-87-6	4-Isopropyltoluene	1.2	< 1.2	U
104-51-8	n-Butylbenzene	1.2	< 1.2	U
120-82-1	1,2,4-Trichlorobenzene	6.0	< 6.0	U
91-20-3	Naphthalene	6.0	< 6.0	U
87-61-6	1,2,3-Trichlorobenzene	6.0	< 6.0	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	117%
d8-Toluene	98.9%
Bromofluorobenzene	91.0%
d4-1,2-Dichlorobenzene	89.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: Q-M-2005
SAMPLE

Lab Sample ID: IK93B
LIMS ID: 05-14179
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Instrument/Analyst: FINN5/PAB
Date Analyzed: 08/24/05 19:00

Sample Amount: 4.65 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 15.0%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	1.1	< 1.1	U
74-83-9	Bromomethane	1.1	< 1.1	U
75-01-4	Vinyl Chloride	1.1	< 1.1	U
75-00-3	Chloroethane	1.1	< 1.1	U
75-09-2	Methylene Chloride	2.2	< 2.2	U
67-64-1	Acetone	5.4	< 5.4	U
75-15-0	Carbon Disulfide	1.1	< 1.1	U
75-35-4	1,1-Dichloroethene	1.1	< 1.1	U
75-34-3	1,1-Dichloroethane	1.1	< 1.1	U
156-60-5	trans-1,2-Dichloroethene	1.1	< 1.1	U
156-59-2	cis-1,2-Dichloroethene	1.1	< 1.1	U
67-66-3	Chloroform	1.1	< 1.1	U
107-06-2	1,2-Dichloroethane	1.1	< 1.1	U
78-93-3	2-Butanone	5.4	< 5.4	U
71-55-6	1,1,1-Trichloroethane	1.1	< 1.1	U
56-23-5	Carbon Tetrachloride	1.1	< 1.1	U
108-05-4	Vinyl Acetate	5.4	< 5.4	U
75-27-4	Bromodichloromethane	1.1	< 1.1	U
78-87-5	1,2-Dichloropropane	1.1	< 1.1	U
10061-01-5	cis-1,3-Dichloropropene	1.1	< 1.1	U
79-01-6	Trichloroethene	1.1	< 1.1	U
124-48-1	Dibromochloromethane	1.1	< 1.1	U
79-00-5	1,1,2-Trichloroethane	1.1	< 1.1	U
71-43-2	Benzene	1.1	< 1.1	U
10061-02-6	trans-1,3-Dichloropropene	1.1	< 1.1	U
110-75-8	2-Chloroethylvinylether	5.4	< 5.4	U
75-25-2	Bromoform	1.1	< 1.1	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.4	< 5.4	U
591-78-6	2-Hexanone	5.4	< 5.4	U
127-18-4	Tetrachloroethene	1.1	< 1.1	U
79-34-5	1,1,2,2-Tetrachloroethane	1.1	< 1.1	U
108-88-3	Toluene	1.1	< 1.1	U
108-90-7	Chlorobenzene	1.1	< 1.1	U
100-41-4	Ethylbenzene	1.1	< 1.1	U
100-42-5	Styrene	1.1	< 1.1	U
75-69-4	Trichlorofluoromethane	1.1	< 1.1	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	2.2	< 2.2	U
1330-20-7	m,p-Xylene	1.1	< 1.1	U
95-47-6	o-Xylene	1.1	< 1.1	U
95-50-1	1,2-Dichlorobenzene	1.1	< 1.1	U
541-73-1	1,3-Dichlorobenzene	1.1	< 1.1	U
106-46-7	1,4-Dichlorobenzene	1.1	< 1.1	U
107-02-8	Acrolein	54	< 54	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: Q-M-2005
SAMPLE

Lab Sample ID: IK93B
LIMS ID: 05-14179
Matrix: Sediment
Date Analyzed: 08/24/05 19:00

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.1	< 1.1	U
74-96-4	Bromoethane	2.2	< 2.2	U
107-13-1	Acrylonitrile	5.4	< 5.4	U
563-58-6	1,1-Dichloropropene	1.1	< 1.1	U
74-95-3	Dibromomethane	1.1	< 1.1	U
630-20-6	1,1,1,2-Tetrachloroethane	1.1	< 1.1	U
96-12-8	1,2-Dibromo-3-chloropropane	5.4	< 5.4	U
96-18-4	1,2,3-Trichloropropane	2.2	< 2.2	U
110-57-6	trans-1,4-Dichloro-2-butene	5.4	< 5.4	U
108-67-8	1,3,5-Trimethylbenzene	1.1	< 1.1	U
95-63-6	1,2,4-Trimethylbenzene	1.1	< 1.1	U
87-68-3	Hexachlorobutadiene	5.4	< 5.4	U
106-93-4	Ethylene Dibromide	1.1	< 1.1	U
74-97-5	Bromochloromethane	1.1	< 1.1	U
594-20-7	2,2-Dichloropropane	1.1	< 1.1	U
142-28-9	1,3-Dichloropropane	1.1	< 1.1	U
98-82-8	Isopropylbenzene	1.1	< 1.1	U
103-65-1	n-Propylbenzene	1.1	< 1.1	U
108-86-1	Bromobenzene	1.1	< 1.1	U
95-49-8	2-Chlorotoluene	1.1	< 1.1	U
106-43-4	4-Chlorotoluene	1.1	< 1.1	U
98-06-6	tert-Butylbenzene	1.1	< 1.1	U
135-98-8	sec-Butylbenzene	1.1	< 1.1	U
99-87-6	4-Isopropyltoluene	1.1	< 1.1	U
104-51-8	n-Butylbenzene	1.1	< 1.1	U
120-82-1	1,2,4-Trichlorobenzene	5.4	< 5.4	U
91-20-3	Naphthalene	5.4	< 5.4	U
87-61-6	1,2,3-Trichlorobenzene	5.4	< 5.4	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	133%
d8-Toluene	104%
Bromofluorobenzene	99.0%
d4-1,2-Dichlorobenzene	91.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: R-M-2005
SAMPLE

Lab Sample ID: IK93C
LIMS ID: 05-14180
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Instrument/Analyst: FINN5/PAB
Date Analyzed: 08/24/05 19:28

Sample Amount: 4.28 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 21.4%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	1.2	< 1.2	U
74-83-9	Bromomethane	1.2	< 1.2	U
75-01-4	Vinyl Chloride	1.2	< 1.2	U
75-00-3	Chloroethane	1.2	< 1.2	U
75-09-2	Methylene Chloride	2.3	< 2.3	U
67-64-1	Acetone	5.8	< 5.8	U
75-15-0	Carbon Disulfide	1.2	< 1.2	U
75-35-4	1,1-Dichloroethene	1.2	< 1.2	U
75-34-3	1,1-Dichloroethane	1.2	< 1.2	U
156-60-5	trans-1,2-Dichloroethene	1.2	< 1.2	U
156-59-2	cis-1,2-Dichloroethene	1.2	< 1.2	U
67-66-3	Chloroform	1.2	< 1.2	U
107-06-2	1,2-Dichloroethane	1.2	< 1.2	U
78-93-3	2-Butanone	5.8	< 5.8	U
71-55-6	1,1,1-Trichloroethane	1.2	< 1.2	U
56-23-5	Carbon Tetrachloride	1.2	< 1.2	U
108-05-4	Vinyl Acetate	5.8	< 5.8	U
75-27-4	Bromodichloromethane	1.2	< 1.2	U
78-87-5	1,2-Dichloropropane	1.2	< 1.2	U
10061-01-5	cis-1,3-Dichloropropene	1.2	< 1.2	U
79-01-6	Trichloroethene	1.2	< 1.2	U
124-48-1	Dibromochloromethane	1.2	< 1.2	U
79-00-5	1,1,2-Trichloroethane	1.2	< 1.2	U
71-43-2	Benzene	1.2	< 1.2	U
10061-02-6	trans-1,3-Dichloropropene	1.2	< 1.2	U
110-75-8	2-Chloroethylvinylether	5.8	< 5.8	U
75-25-2	Bromoform	1.2	< 1.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.8	< 5.8	U
591-78-6	2-Hexanone	5.8	< 5.8	U
127-18-4	Tetrachloroethene	1.2	< 1.2	U
79-34-5	1,1,2,2-Tetrachloroethane	1.2	< 1.2	U
108-88-3	Toluene	1.2	< 1.2	U
108-90-7	Chlorobenzene	1.2	< 1.2	U
100-41-4	Ethylbenzene	1.2	< 1.2	U
100-42-5	Styrene	1.2	< 1.2	U
75-69-4	Trichlorofluoromethane	1.2	< 1.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	2.3	< 2.3	U
1330-20-7	m,p-Xylene	1.2	< 1.2	U
95-47-6	o-Xylene	1.2	< 1.2	U
95-50-1	1,2-Dichlorobenzene	1.2	< 1.2	U
541-73-1	1,3-Dichlorobenzene	1.2	< 1.2	U
106-46-7	1,4-Dichlorobenzene	1.2	< 1.2	U
107-02-8	Acrolein	58	< 58	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: R-M-2005
SAMPLE

Lab Sample ID: IK93C
LIMS ID: 05-14180
Matrix: Sediment
Date Analyzed: 08/24/05 19:28

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.2	< 1.2	U
74-96-4	Bromoethane	2.3	< 2.3	U
107-13-1	Acrylonitrile	5.8	< 5.8	U
563-58-6	1,1-Dichloropropene	1.2	< 1.2	U
74-95-3	Dibromomethane	1.2	< 1.2	U
630-20-6	1,1,1,2-Tetrachloroethane	1.2	< 1.2	U
96-12-8	1,2-Dibromo-3-chloropropane	5.8	< 5.8	U
96-18-4	1,2,3-Trichloropropane	2.3	< 2.3	U
110-57-6	trans-1,4-Dichloro-2-butene	5.8	< 5.8	U
108-67-8	1,3,5-Trimethylbenzene	1.2	< 1.2	U
95-63-6	1,2,4-Trimethylbenzene	1.2	< 1.2	U
87-68-3	Hexachlorobutadiene	5.8	< 5.8	U
106-93-4	Ethylene Dibromide	1.2	< 1.2	U
74-97-5	Bromochloromethane	1.2	< 1.2	U
594-20-7	2,2-Dichloropropane	1.2	< 1.2	U
142-28-9	1,3-Dichloropropane	1.2	< 1.2	U
98-82-8	Isopropylbenzene	1.2	< 1.2	U
103-65-1	n-Propylbenzene	1.2	< 1.2	U
108-86-1	Bromobenzene	1.2	< 1.2	U
95-49-8	2-Chlorotoluene	1.2	< 1.2	U
106-43-4	4-Chlorotoluene	1.2	< 1.2	U
98-06-6	tert-Butylbenzene	1.2	< 1.2	U
135-98-8	sec-Butylbenzene	1.2	< 1.2	U
99-87-6	4-Isopropyltoluene	1.2	< 1.2	U
104-51-8	n-Butylbenzene	1.2	< 1.2	U
120-82-1	1,2,4-Trichlorobenzene	5.8	< 5.8	U
91-20-3	Naphthalene	5.8	< 5.8	U
87-61-6	1,2,3-Trichlorobenzene	5.8	< 5.8	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	128%
d8-Toluene	100%
Bromofluorobenzene	96.4%
d4-1,2-Dichlorobenzene	92.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: S-M-2005
SAMPLE

Lab Sample ID: IK93A
LIMS ID: 05-14178
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Instrument/Analyst: FINN5/PAB
Date Analyzed: 08/24/05 18:32

Sample Amount: 5.17 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 23.9%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	1.0	< 1.0	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	1.0	< 1.0	U
75-00-3	Chloroethane	1.0	< 1.0	U
75-09-2	Methylene Chloride	1.9	< 1.9	U
67-64-1	Acetone	4.8	< 4.8	U
75-15-0	Carbon Disulfide	1.0	< 1.0	U
75-35-4	1,1-Dichloroethene	1.0	< 1.0	U
75-34-3	1,1-Dichloroethane	1.0	< 1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	< 1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	< 1.0	U
67-66-3	Chloroform	1.0	< 1.0	U
107-06-2	1,2-Dichloroethane	1.0	< 1.0	U
78-93-3	2-Butanone	4.8	< 4.8	U
71-55-6	1,1,1-Trichloroethane	1.0	< 1.0	U
56-23-5	Carbon Tetrachloride	1.0	< 1.0	U
108-05-4	Vinyl Acetate	4.8	< 4.8	U
75-27-4	Bromodichloromethane	1.0	< 1.0	U
78-87-5	1,2-Dichloropropane	1.0	< 1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	< 1.0	U
79-01-6	Trichloroethene	1.0	< 1.0	U
124-48-1	Dibromochloromethane	1.0	< 1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	< 1.0	U
71-43-2	Benzene	1.0	< 1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	< 1.0	U
110-75-8	2-Chloroethylvinylether	4.8	< 4.8	U
75-25-2	Bromoform	1.0	< 1.0	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	4.8	< 4.8	U
591-78-6	2-Hexanone	4.8	< 4.8	U
127-18-4	Tetrachloroethene	1.0	< 1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
108-90-7	Chlorobenzene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
100-42-5	Styrene	1.0	< 1.0	U
75-69-4	Trichlorofluoromethane	1.0	< 1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	1.9	< 1.9	U
1330-20-7	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0	U
107-02-8	Acrolein	48	< 48	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: S-M-2005
SAMPLE

Lab Sample ID: IK93A
LIMS ID: 05-14178
Matrix: Sediment
Date Analyzed: 08/24/05 18:32

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	1.9	< 1.9	U
107-13-1	Acrylonitrile	4.8	< 4.8	U
563-58-6	1,1-Dichloropropene	1.0	< 1.0	U
74-95-3	Dibromomethane	1.0	< 1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	< 1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	4.8	< 4.8	U
96-18-4	1,2,3-Trichloropropane	1.9	< 1.9	U
110-57-6	trans-1,4-Dichloro-2-butene	4.8	< 4.8	U
108-67-8	1,3,5-Trimethylbenzene	1.0	< 1.0	U
95-63-6	1,2,4-Trimethylbenzene	1.0	< 1.0	U
87-68-3	Hexachlorobutadiene	4.8	< 4.8	U
106-93-4	Ethylene Dibromide	1.0	< 1.0	U
74-97-5	Bromochloromethane	1.0	< 1.0	U
594-20-7	2,2-Dichloropropane	1.0	< 1.0	U
142-28-9	1,3-Dichloropropane	1.0	< 1.0	U
98-82-8	Isopropylbenzene	1.0	< 1.0	U
103-65-1	n-Propylbenzene	1.0	< 1.0	U
108-86-1	Bromobenzene	1.0	< 1.0	U
95-49-8	2-Chlorotoluene	1.0	< 1.0	U
106-43-4	4-Chlorotoluene	1.0	< 1.0	U
98-06-6	tert-Butylbenzene	1.0	< 1.0	U
135-98-8	sec-Butylbenzene	1.0	< 1.0	U
99-87-6	4-Isopropyltoluene	1.0	< 1.0	U
104-51-8	n-Butylbenzene	1.0	< 1.0	U
120-82-1	1,2,4-Trichlorobenzene	4.8	< 4.8	U
91-20-3	Naphthalene	4.8	< 4.8	U
87-61-6	1,2,3-Trichlorobenzene	4.8	< 4.8	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	126%
d8-Toluene	99.7%
Bromofluorobenzene	95.9%
d4-1,2-Dichlorobenzene	90.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: N-M-2005
MATRIX SPIKE

Lab Sample ID: IK93M
LIMS ID: 05-14190
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Instrument/Analyst: FINN5/PAB
Date Analyzed: 08/26/05 17:02

Sample Amount: 4.76 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 20.1%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	1.0	---	
74-83-9	Bromomethane	1.0	---	
75-01-4	Vinyl Chloride	1.0	---	
75-00-3	Chloroethane	1.0	---	
75-09-2	Methylene Chloride	2.1	---	
67-64-1	Acetone	5.2	---	
75-15-0	Carbon Disulfide	1.0	---	
75-35-4	1,1-Dichloroethene	1.0	---	
75-34-3	1,1-Dichloroethane	1.0	---	
156-60-5	trans-1,2-Dichloroethene	1.0	---	
156-59-2	cis-1,2-Dichloroethene	1.0	---	
67-66-3	Chloroform	1.0	---	
107-06-2	1,2-Dichloroethane	1.0	---	
78-93-3	2-Butanone	5.2	---	
71-55-6	1,1,1-Trichloroethane	1.0	---	
56-23-5	Carbon Tetrachloride	1.0	---	
108-05-4	Vinyl Acetate	5.2	---	
75-27-4	Bromodichloromethane	1.0	---	
78-87-5	1,2-Dichloropropane	1.0	---	
10061-01-5	cis-1,3-Dichloropropene	1.0	---	
79-01-6	Trichloroethene	1.0	---	
124-48-1	Dibromochloromethane	1.0	---	
79-00-5	1,1,2-Trichloroethane	1.0	---	
71-43-2	Benzene	1.0	---	
10061-02-6	trans-1,3-Dichloropropene	1.0	---	
110-75-8	2-Chloroethylvinylether	5.2	---	
75-25-2	Bromoform	1.0	---	
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.2	---	
591-78-6	2-Hexanone	5.2	---	
127-18-4	Tetrachloroethene	1.0	---	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	---	
108-88-3	Toluene	1.0	---	
108-90-7	Chlorobenzene	1.0	---	
100-41-4	Ethylbenzene	1.0	---	
100-42-5	Styrene	1.0	---	
75-69-4	Trichlorofluoromethane	1.0	---	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	2.1	---	
1330-20-7	m,p-Xylene	1.0	---	
95-47-6	o-Xylene	1.0	---	
95-50-1	1,2-Dichlorobenzene	1.0	---	
541-73-1	1,3-Dichlorobenzene	1.0	---	
106-46-7	1,4-Dichlorobenzene	1.0	---	
107-02-8	Acrolein	52	---	

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: N-M-2005
MATRIX SPIKE

Lab Sample ID: IK93M
LIMS ID: 05-14190
Matrix: Sediment
Date Analyzed: 08/26/05 17:02

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	---	
74-96-4	Bromoethane	2.1	---	
107-13-1	Acrylonitrile	5.2	---	
563-58-6	1,1-Dichloropropene	1.0	---	
74-95-3	Dibromomethane	1.0	---	
630-20-6	1,1,1,2-Tetrachloroethane	1.0	---	
96-12-8	1,2-Dibromo-3-chloropropane	5.2	---	
96-18-4	1,2,3-Trichloropropane	2.1	---	
110-57-6	trans-1,4-Dichloro-2-butene	5.2	---	
108-67-8	1,3,5-Trimethylbenzene	1.0	---	
95-63-6	1,2,4-Trimethylbenzene	1.0	---	
87-68-3	Hexachlorobutadiene	5.2	---	
106-93-4	Ethylene Dibromide	1.0	---	
74-97-5	Bromochloromethane	1.0	---	
594-20-7	2,2-Dichloropropane	1.0	---	
142-28-9	1,3-Dichloropropane	1.0	---	
98-82-8	Isopropylbenzene	1.0	---	
103-65-1	n-Propylbenzene	1.0	---	
108-86-1	Bromobenzene	1.0	---	
95-49-8	2-Chlorotoluene	1.0	---	
106-43-4	4-Chlorotoluene	1.0	---	
98-06-6	tert-Butylbenzene	1.0	---	
135-98-8	sec-Butylbenzene	1.0	---	
99-87-6	4-Isopropyltoluene	1.0	---	
104-51-8	n-Butylbenzene	1.0	---	
120-82-1	1,2,4-Trichlorobenzene	5.2	---	
91-20-3	Naphthalene	5.2	---	
87-61-6	1,2,3-Trichlorobenzene	5.2	---	

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	111%
d8-Toluene	99.1%
Bromofluorobenzene	91.4%
d4-1,2-Dichlorobenzene	90.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: N-M-2005
MATRIX SPIKE DUP

Lab Sample ID: IK93M
LIMS ID: 05-14190
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Instrument/Analyst: FINN5/PAB
Date Analyzed: 08/26/05 17:30

Sample Amount: 4.82 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 20.1%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	1.0	---	
74-83-9	Bromomethane	1.0	---	
75-01-4	Vinyl Chloride	1.0	---	
75-00-3	Chloroethane	1.0	---	
75-09-2	Methylene Chloride	2.1	---	
67-64-1	Acetone	5.2	---	
75-15-0	Carbon Disulfide	1.0	---	
75-35-4	1,1-Dichloroethene	1.0	---	
75-34-3	1,1-Dichloroethane	1.0	---	
156-60-5	trans-1,2-Dichloroethene	1.0	---	
156-59-2	cis-1,2-Dichloroethene	1.0	---	
67-66-3	Chloroform	1.0	---	
107-06-2	1,2-Dichloroethane	1.0	---	
78-93-3	2-Butanone	5.2	---	
71-55-6	1,1,1-Trichloroethane	1.0	---	
56-23-5	Carbon Tetrachloride	1.0	---	
108-05-4	Vinyl Acetate	5.2	---	
75-27-4	Bromodichloromethane	1.0	---	
78-87-5	1,2-Dichloropropane	1.0	---	
10061-01-5	cis-1,3-Dichloropropene	1.0	---	
79-01-6	Trichloroethene	1.0	---	
124-48-1	Dibromochloromethane	1.0	---	
79-00-5	1,1,2-Trichloroethane	1.0	---	
71-43-2	Benzene	1.0	---	
10061-02-6	trans-1,3-Dichloropropene	1.0	---	
110-75-8	2-Chloroethylvinylether	5.2	---	
75-25-2	Bromoform	1.0	---	
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.2	---	
591-78-6	2-Hexanone	5.2	---	
127-18-4	Tetrachloroethene	1.0	---	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	---	
108-88-3	Toluene	1.0	---	
108-90-7	Chlorobenzene	1.0	---	
100-41-4	Ethylbenzene	1.0	---	
100-42-5	Styrene	1.0	---	
75-69-4	Trichlorofluoromethane	1.0	---	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	2.1	---	
1330-20-7	m,p-Xylene	1.0	---	
95-47-6	o-Xylene	1.0	---	
95-50-1	1,2-Dichlorobenzene	1.0	---	
541-73-1	1,3-Dichlorobenzene	1.0	---	
106-46-7	1,4-Dichlorobenzene	1.0	---	
107-02-8	Acrolein	52	---	

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: N-M-2005
MATRIX SPIKE DUP

Lab Sample ID: IK93M
LIMS ID: 05-14190
Matrix: Sediment
Date Analyzed: 08/26/05 17:30

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	---	
74-96-4	Bromoethane	2.1	---	
107-13-1	Acrylonitrile	5.2	---	
563-58-6	1,1-Dichloropropene	1.0	---	
74-95-3	Dibromomethane	1.0	---	
630-20-6	1,1,1,2-Tetrachloroethane	1.0	---	
96-12-8	1,2-Dibromo-3-chloropropane	5.2	---	
96-18-4	1,2,3-Trichloropropane	2.1	---	
110-57-6	trans-1,4-Dichloro-2-butene	5.2	---	
108-67-8	1,3,5-Trimethylbenzene	1.0	---	
95-63-6	1,2,4-Trimethylbenzene	1.0	---	
87-68-3	Hexachlorobutadiene	5.2	---	
106-93-4	Ethylene Dibromide	1.0	---	
74-97-5	Bromochloromethane	1.0	---	
594-20-7	2,2-Dichloropropane	1.0	---	
142-28-9	1,3-Dichloropropane	1.0	---	
98-82-8	Isopropylbenzene	1.0	---	
103-65-1	n-Propylbenzene	1.0	---	
108-86-1	Bromobenzene	1.0	---	
95-49-8	2-Chlorotoluene	1.0	---	
106-43-4	4-Chlorotoluene	1.0	---	
98-06-6	tert-Butylbenzene	1.0	---	
135-98-8	sec-Butylbenzene	1.0	---	
99-87-6	4-Isopropyltoluene	1.0	---	
104-51-8	n-Butylbenzene	1.0	---	
120-82-1	1,2,4-Trichlorobenzene	5.2	---	
91-20-3	Naphthalene	5.2	---	
87-61-6	1,2,3-Trichlorobenzene	5.2	---	

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	108%
d8-Toluene	99.2%
Bromofluorobenzene	91.5%
d4-1,2-Dichlorobenzene	89.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: MB-082405
METHOD BLANK

Lab Sample ID: MB-082405
LIMS ID: 05-14178
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Instrument/Analyst: FINN5/PAB
Date Analyzed: 08/24/05 11:45

Sample Amount: 5.00 g-dry-wt
Purge Volume: 5.0 mL
Moisture: NA

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	1.0	< 1.0	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	1.0	< 1.0	U
75-00-3	Chloroethane	1.0	< 1.0	U
75-09-2	Methylene Chloride	2.0	< 2.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	1.0	< 1.0	U
75-35-4	1,1-Dichloroethene	1.0	< 1.0	U
75-34-3	1,1-Dichloroethane	1.0	< 1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	< 1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	< 1.0	U
67-66-3	Chloroform	1.0	< 1.0	U
107-06-2	1,2-Dichloroethane	1.0	< 1.0	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	1.0	< 1.0	U
56-23-5	Carbon Tetrachloride	1.0	< 1.0	U
108-05-4	Vinyl Acetate	5.0	< 5.0	U
75-27-4	Bromodichloromethane	1.0	< 1.0	U
78-87-5	1,2-Dichloropropane	1.0	< 1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	< 1.0	U
79-01-6	Trichloroethene	1.0	< 1.0	U
124-48-1	Dibromochloromethane	1.0	< 1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	< 1.0	U
71-43-2	Benzene	1.0	< 1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	< 1.0	U
110-75-8	2-Chloroethylvinylether	5.0	< 5.0	U
75-25-2	Bromoform	1.0	< 1.0	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	1.0	< 1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
108-90-7	Chlorobenzene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
100-42-5	Styrene	1.0	< 1.0	U
75-69-4	Trichlorofluoromethane	1.0	< 1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	2.0	< 2.0	U
1330-20-7	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0	U
107-02-8	Acrolein	50	< 50	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: MB-082405
METHOD BLANK

Lab Sample ID: MB-082405
LIMS ID: 05-14178
Matrix: Sediment
Date Analyzed: 08/24/05 11:45

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	2.0	< 2.0	U
107-13-1	Acrylonitrile	5.0	< 5.0	U
563-58-6	1,1-Dichloropropene	1.0	< 1.0	U
74-95-3	Dibromomethane	1.0	< 1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	< 1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	< 5.0	U
96-18-4	1,2,3-Trichloropropane	2.0	< 2.0	U
110-57-6	trans-1,4-Dichloro-2-butene	5.0	< 5.0	U
108-67-8	1,3,5-Trimethylbenzene	1.0	< 1.0	U
95-63-6	1,2,4-Trimethylbenzene	1.0	< 1.0	U
87-68-3	Hexachlorobutadiene	5.0	< 5.0	U
106-93-4	Ethylene Dibromide	1.0	< 1.0	U
74-97-5	Bromochloromethane	1.0	< 1.0	U
594-20-7	2,2-Dichloropropane	1.0	< 1.0	U
142-28-9	1,3-Dichloropropane	1.0	< 1.0	U
98-82-8	Isopropylbenzene	1.0	< 1.0	U
103-65-1	n-Propylbenzene	1.0	< 1.0	U
108-86-1	Bromobenzene	1.0	< 1.0	U
95-49-8	2-Chlorotoluene	1.0	< 1.0	U
106-43-4	4-Chlorotoluene	1.0	< 1.0	U
98-06-6	tert-Butylbenzene	1.0	< 1.0	U
135-98-8	sec-Butylbenzene	1.0	< 1.0	U
99-87-6	4-Isopropyltoluene	1.0	< 1.0	U
104-51-8	n-Butylbenzene	1.0	< 1.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	< 5.0	U
91-20-3	Naphthalene	5.0	< 5.0	U
87-61-6	1,2,3-Trichlorobenzene	5.0	< 5.0	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	120%
d8-Toluene	97.7%
Bromofluorobenzene	98.9%
d4-1,2-Dichlorobenzene	92.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: MB-082605
METHOD BLANK

Lab Sample ID: MB-082605
LIMS ID: 05-14190
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Instrument/Analyst: FINN5/PAB
Date Analyzed: 08/26/05 11:12

Sample Amount: 5.00 g-dry-wt
Purge Volume: 5.0 mL
Moisture: NA

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	1.0	< 1.0	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	1.0	< 1.0	U
75-00-3	Chloroethane	1.0	< 1.0	U
75-09-2	Methylene Chloride	2.0	< 2.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	1.0	< 1.0	U
75-35-4	1,1-Dichloroethene	1.0	< 1.0	U
75-34-3	1,1-Dichloroethane	1.0	< 1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	< 1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	< 1.0	U
67-66-3	Chloroform	1.0	< 1.0	U
107-06-2	1,2-Dichloroethane	1.0	< 1.0	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	1.0	< 1.0	U
56-23-5	Carbon Tetrachloride	1.0	< 1.0	U
108-05-4	Vinyl Acetate	5.0	< 5.0	U
75-27-4	Bromodichloromethane	1.0	< 1.0	U
78-87-5	1,2-Dichloropropane	1.0	< 1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	< 1.0	U
79-01-6	Trichloroethene	1.0	< 1.0	U
124-48-1	Dibromochloromethane	1.0	< 1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	< 1.0	U
71-43-2	Benzene	1.0	< 1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	< 1.0	U
110-75-8	2-Chloroethylvinylether	5.0	< 5.0	U
75-25-2	Bromoform	1.0	< 1.0	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	1.0	< 1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
108-90-7	Chlorobenzene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
100-42-5	Styrene	1.0	< 1.0	U
75-69-4	Trichlorofluoromethane	1.0	< 1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	2.0	< 2.0	U
1330-20-7	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0	U
107-02-8	Acrolein	50	< 50	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: MB-082605
METHOD BLANK

Lab Sample ID: MB-082605
LIMS ID: 05-14190
Matrix: Sediment
Date Analyzed: 08/26/05 11:12

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	2.0	< 2.0	U
107-13-1	Acrylonitrile	5.0	< 5.0	U
563-58-6	1,1-Dichloropropene	1.0	< 1.0	U
74-95-3	Dibromomethane	1.0	< 1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	< 1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	< 5.0	U
96-18-4	1,2,3-Trichloropropane	2.0	< 2.0	U
110-57-6	trans-1,4-Dichloro-2-butene	5.0	< 5.0	U
108-67-8	1,3,5-Trimethylbenzene	1.0	< 1.0	U
95-63-6	1,2,4-Trimethylbenzene	1.0	< 1.0	U
87-68-3	Hexachlorobutadiene	5.0	< 5.0	U
106-93-4	Ethylene Dibromide	1.0	< 1.0	U
74-97-5	Bromochloromethane	1.0	< 1.0	U
594-20-7	2,2-Dichloropropane	1.0	< 1.0	U
142-28-9	1,3-Dichloropropane	1.0	< 1.0	U
98-82-8	Isopropylbenzene	1.0	< 1.0	U
103-65-1	n-Propylbenzene	1.0	< 1.0	U
108-86-1	Bromobenzene	1.0	< 1.0	U
95-49-8	2-Chlorotoluene	1.0	< 1.0	U
106-43-4	4-Chlorotoluene	1.0	< 1.0	U
98-06-6	tert-Butylbenzene	1.0	< 1.0	U
135-98-8	sec-Butylbenzene	1.0	< 1.0	U
99-87-6	4-Isopropyltoluene	1.0	< 1.0	U
104-51-8	n-Butylbenzene	1.0	< 1.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	< 5.0	U
91-20-3	Naphthalene	5.0	< 5.0	U
87-61-6	1,2,3-Trichlorobenzene	5.0	< 5.0	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	111%
d8-Toluene	93.8%
Bromofluorobenzene	90.0%
d4-1,2-Dichlorobenzene	90.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: MB-082705
METHOD BLANK

Lab Sample ID: MB-082705
LIMS ID: 05-14197
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Instrument/Analyst: FINN5/PAB
Date Analyzed: 08/27/05 13:25

Sample Amount: 5.00 g-dry-wt
Purge Volume: 5.0 mL
Moisture: NA

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	1.0	< 1.0	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	1.0	< 1.0	U
75-00-3	Chloroethane	1.0	< 1.0	U
75-09-2	Methylene Chloride	2.0	< 2.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	1.0	< 1.0	U
75-35-4	1,1-Dichloroethene	1.0	< 1.0	U
75-34-3	1,1-Dichloroethane	1.0	< 1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	< 1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	< 1.0	U
67-66-3	Chloroform	1.0	< 1.0	U
107-06-2	1,2-Dichloroethane	1.0	< 1.0	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	1.0	< 1.0	U
56-23-5	Carbon Tetrachloride	1.0	< 1.0	U
108-05-4	Vinyl Acetate	5.0	< 5.0	U
75-27-4	Bromodichloromethane	1.0	< 1.0	U
78-87-5	1,2-Dichloropropane	1.0	< 1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	< 1.0	U
79-01-6	Trichloroethene	1.0	< 1.0	U
124-48-1	Dibromochloromethane	1.0	< 1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	< 1.0	U
71-43-2	Benzene	1.0	< 1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	< 1.0	U
110-75-8	2-Chloroethylvinylether	5.0	< 5.0	U
75-25-2	Bromoform	1.0	< 1.0	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	1.0	< 1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
108-90-7	Chlorobenzene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
100-42-5	Styrene	1.0	< 1.0	U
75-69-4	Trichlorofluoromethane	1.0	< 1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	2.0	< 2.0	U
1330-20-7	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0	U
107-02-8	Acrolein	50	< 50	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: MB-082705
METHOD BLANK

Lab Sample ID: MB-082705
LIMS ID: 05-14197
Matrix: Sediment
Date Analyzed: 08/27/05 13:25

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	2.0	< 2.0	U
107-13-1	Acrylonitrile	5.0	< 5.0	U
563-58-6	1,1-Dichloropropene	1.0	< 1.0	U
74-95-3	Dibromomethane	1.0	< 1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	< 1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	< 5.0	U
96-18-4	1,2,3-Trichloropropane	2.0	< 2.0	U
110-57-6	trans-1,4-Dichloro-2-butene	5.0	< 5.0	U
108-67-8	1,3,5-Trimethylbenzene	1.0	< 1.0	U
95-63-6	1,2,4-Trimethylbenzene	1.0	< 1.0	U
87-68-3	Hexachlorobutadiene	5.0	< 5.0	U
106-93-4	Ethylene Dibromide	1.0	< 1.0	U
74-97-5	Bromochloromethane	1.0	< 1.0	U
594-20-7	2,2-Dichloropropane	1.0	< 1.0	U
142-28-9	1,3-Dichloropropane	1.0	< 1.0	U
98-82-8	Isopropylbenzene	1.0	< 1.0	U
103-65-1	n-Propylbenzene	1.0	< 1.0	U
108-86-1	Bromobenzene	1.0	< 1.0	U
95-49-8	2-Chlorotoluene	1.0	< 1.0	U
106-43-4	4-Chlorotoluene	1.0	< 1.0	U
98-06-6	tert-Butylbenzene	1.0	< 1.0	U
135-98-8	sec-Butylbenzene	1.0	< 1.0	U
99-87-6	4-Isopropyltoluene	1.0	< 1.0	U
104-51-8	n-Butylbenzene	1.0	< 1.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	< 5.0	U
91-20-3	Naphthalene	5.0	< 5.0	U
87-61-6	1,2,3-Trichlorobenzene	5.0	< 5.0	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	120%
d8-Toluene	97.9%
Bromofluorobenzene	91.9%
d4-1,2-Dichlorobenzene	89.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260B **Sample ID: TRIP BLANK SAMPLE**

Lab Sample ID: IK93W
LIMS ID: 05-14200
Matrix: Water
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1 7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Instrument/Analyst: FINN5/PAB
Date Analyzed: 08/27/05 14:06

Sample Amount: 5.00 mL
Purge Volume: 5.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	1.0	< 1.0	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	1.0	< 1.0	U
75-00-3	Chloroethane	1.0	< 1.0	U
75-09-2	Methylene Chloride	2.0	< 2.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	1.0	< 1.0	U
75-35-4	1,1-Dichloroethene	1.0	< 1.0	U
75-34-3	1,1-Dichloroethane	1.0	< 1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	< 1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	< 1.0	U
67-66-3	Chloroform	1.0	< 1.0	U
107-06-2	1,2-Dichloroethane	1.0	< 1.0	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	1.0	< 1.0	U
56-23-5	Carbon Tetrachloride	1.0	< 1.0	U
108-05-4	Vinyl Acetate	5.0	< 5.0	U
75-27-4	Bromodichloromethane	1.0	< 1.0	U
78-87-5	1,2-Dichloropropane	1.0	< 1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	< 1.0	U
79-01-6	Trichloroethene	1.0	< 1.0	U
124-48-1	Dibromochloromethane	1.0	< 1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	< 1.0	U
71-43-2	Benzene	1.0	< 1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	< 1.0	U
110-75-8	2-Chloroethylvinylether	5.0	< 5.0	U
75-25-2	Bromoform	1.0	< 1.0	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	1.0	< 1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
108-90-7	Chlorobenzene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
100-42-5	Styrene	1.0	< 1.0	U
75-69-4	Trichlorofluoromethane	1.0	< 1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	2.0	< 2.0	U
1330-20-7	m,p-Xylene	1.0	< 1.0	U
95-47-6	o-Xylene	1.0	< 1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0	U
107-02-8	Acrolein	50	< 50	U
74-88-4	Methyl Iodide	1.0	< 1.0	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260B

Sample ID: TRIP BLANK SAMPLE

Lab Sample ID: IK93W
LIMS ID: 05-14200
Matrix: Water
Date Analyzed: 08/27/05 14:06

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1 7946-02

CAS Number	Analyte	RL	Result	Q
74-96-4	Bromoethane	2.0	< 2.0	U
107-13-1	Acrylonitrile	5.0	< 5.0	U
563-58-6	1,1-Dichloropropene	1.0	< 1.0	U
74-95-3	Dibromomethane	1.0	< 1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	< 1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	< 5.0	U
96-18-4	1,2,3-Trichloropropane	2.0	< 2.0	U
110-57-6	trans-1,4-Dichloro-2-butene	5.0	< 5.0	U
108-67-8	1,3,5-Trimethylbenzene	1.0	< 1.0	U
95-63-6	1,2,4-Trimethylbenzene	1.0	< 1.0	U
87-68-3	Hexachlorobutadiene	5.0	< 5.0	U
106-93-4	Ethylene Dibromide	1.0	< 1.0	U
74-97-5	Bromochloromethane	1.0	< 1.0	U
594-20-7	2,2-Dichloropropane	1.0	< 1.0	U
142-28-9	1,3-Dichloropropane	1.0	< 1.0	U
98-82-8	Isopropylbenzene	1.0	< 1.0	U
103-65-1	n-Propylbenzene	1.0	< 1.0	U
108-86-1	Bromobenzene	1.0	< 1.0	U
95-49-8	2-Chlorotoluene	1.0	< 1.0	U
106-43-4	4-Chlorotoluene	1.0	< 1.0	U
98-06-6	tert-Butylbenzene	1.0	< 1.0	U
135-98-8	sec-Butylbenzene	1.0	< 1.0	U
99-87-6	4-Isopropyltoluene	1.0	< 1.0	U
104-51-8	n-Butylbenzene	1.0	< 1.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	< 5.0	U
91-20-3	Naphthalene	5.0	< 5.0	U
87-61-6	1,2,3-Trichlorobenzene	5.0	< 5.0	U

Reported in μg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	126%
d8-Toluene	99.8%
Bromofluorobenzene	91.2%
d4-1,2-Dichlorobenzene	90.1%

ANALYTICAL RESOURCES INCORPORATED

SW8260 SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

Client ID	DCE	TOL	BFB	DCB	TOT OUT
MB-082405	120%	97.7%	98.9%	92.8%	0
LCS-082405	108%	96.0%	101%	93.2%	0
LCSD-082405	110%	97.7%	99.1%	94.5%	0
S-M-2005	126%	99.7%	95.9%	90.4%	0
Q-M-2005	133%	104%	99.0%	91.1%	0
R-M-2005	128%	100%	96.4%	92.6%	0
P-M-2005	117%	98.9%	91.0%	89.0%	0
O-M-2005	129%	101%	99.5%	91.8%	0
M-M-2005	118%	96.6%	88.2%	90.3%	0
MD-M-2005	119%	96.5%	86.9%	89.0%	0
L-M-2005	115%	97.9%	87.9%	90.7%	0
J-M-2005	119%	98.1%	87.0%	87.7%	0
HI-M-2005	120%	96.0%	87.6%	90.0%	0
G-M-2005	119%	98.0%	87.7%	89.7%	0
A-2-M-2005	122%	99.1%	88.4%	91.6%	0
MB-082605	111%	93.8%	90.0%	90.2%	0
LCS-082605	100%	94.7%	90.1%	92.6%	0
LCSD-082605	104%	94.7%	91.1%	92.6%	0
N-M-2005	122%	99.4%	92.9%	90.1%	0
N-M-2005 MS	111%	99.1%	91.4%	90.5%	0
N-M-2005 MSD	108%	99.2%	91.5%	89.2%	0
K-M-2005	116%	98.7%	88.3%	89.6%	0
F-2-M-2005	123%	96.9%	88.7%	89.4%	0
F-1-M-2005	121%	97.6%	87.6%	88.1%	0
FD-1-M-2005	121%	98.1%	88.2%	88.2%	0
E-M-2005	122%	98.6%	85.5%	89.4%	0
CD-M-2005	123%	99.3%	85.0%	88.3%	0
MB-082705	120%	97.9%	91.9%	89.9%	0
LCS-082705	111%	100%	92.0%	92.1%	0
LCSD-082705	114%	100%	92.5%	91.3%	0
AB-M-2005	128%	101%	86.4%	87.9%	0
B-2-M-2005	131%	102%	87.1%	86.4%	0

	LCS/MB LIMITS	QC LIMITS
(DCE) = d4-1,2-Dichloroethane	(74-128)	(71-143)

FORM-II SW8260

		LCS/MB LIMITS	QC LIMITS
(TOL)	= d8-Toluene	(76-119)	(79-118)
(BFB)	= Bromofluorobenzene	(78-116)	(69-126)
(DCB)	= d4-1,2-Dichlorobenzene	(78-122)	(79-119)

Prep Method: SW5030
Analytical Method: PSDDA/PSEP
Log Number Range: 05-14178 to 05-14198

ANALYTICAL RESOURCES INCORPORATED

WATER VOLATILE SYSTEM MONITORING COMPOUND SUMMARY

Matrix: Water 5 mL

QC Report No: IK93

Lab ID	Client ID	DCE	TOL	BFB	DCB	TOT OUT
IK93W	TRIP BLANK	126%	99.8%	91.2%	90.1%	0

SW8260B	LCS/MB LIMITS	QC LIMITS
(DCE) = 1,2-Dichloroethane-d4	(74-133)	(74-142)
(TOL) = Toluene-d8	(77-131)	(84-129)
(BFB) = Bromofluorobenzene	(79-127)	(77-122)
(DCB) = 1,2-Dichlorobenzene-d4	(84-132)	(85-135)

\# Column to be used to flag recovery values

* Values outside of required QC limits

D System Monitoring Compound diluted out

FORM-II VOA-1

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: N-M-2005
MATRIX SPIKE

Lab Sample ID: IK93M
LIMS ID: 05-14190
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Instrument/Analyst MS: FINN5/PAB
MSD: FINN5/PAB
Date Analyzed MS: 08/26/05 17:02
MSD: 08/26/05 17:30

Sample Amount MS: 4.76 g-dry-wt
MSD: 4.82 g-dry-wt
Purge Volume MS: 5.0 mL
MSD: 5.0 mL
Moisture: 20.1%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Chloromethane	< 1.1 U	47.6	52.5	90.7%	46.2	51.9	89.0%	3.0%
Bromomethane	< 1.1 U	37.9	52.5	72.2%	40.2	51.9	77.5%	5.9%
Vinyl Chloride	< 1.1 U	52.6	52.5	100%	50.1	51.9	96.5%	4.9%
Chloroethane	< 1.1 U	54.3	52.5	103%	52.3	51.9	101%	3.8%
Methylene Chloride	< 2.2 U	65.1	52.5	124%	64.2	51.9	124%	1.4%
Acetone	< 5.4 U	222	263	84.4%	217	259	83.8%	2.3%
Carbon Disulfide	< 1.1 U	30.2	52.5	57.5%	31.1	51.9	59.9%	2.9%
1,1-Dichloroethene	< 1.1 U	48.0	52.5	91.4%	47.0	51.9	90.6%	2.1%
1,1-Dichloroethane	< 1.1 U	52.5	52.5	100%	50.7	51.9	97.7%	3.5%
trans-1,2-Dichloroethene	< 1.1 U	44.0	52.5	83.8%	43.0	51.9	82.9%	2.3%
cis-1,2-Dichloroethene	< 1.1 U	44.4	52.5	84.6%	44.1	51.9	85.0%	0.7%
Chloroform	< 1.1 U	58.1	52.5	111%	56.4	51.9	109%	3.0%
1,2-Dichloroethane	< 1.1 U	47.0	52.5	89.5%	47.7	51.9	91.9%	1.5%
2-Butanone	< 5.4 U	231	263	87.8%	234	259	90.3%	1.3%
1,1,1-Trichloroethane	< 1.1 U	50.2	52.5	95.6%	49.2	51.9	94.8%	2.0%
Carbon Tetrachloride	< 1.1 U	36.7	52.5	69.9%	35.4	51.9	68.2%	3.6%
Vinyl Acetate	< 5.4 U	53.1	52.5	101%	52.1	51.9	100%	1.9%
Bromodichloromethane	< 1.1 U	29.0	52.5	55.2%	30.1	51.9	58.0%	3.7%
1,2-Dichloropropane	< 1.1 U	52.1	52.5	99.2%	51.8	51.9	99.8%	0.6%
cis-1,3-Dichloropropene	< 1.1 U	38.3	52.5	73.0%	39.6	51.9	76.3%	3.3%
Trichloroethene	< 1.1 U	46.5	52.5	88.6%	46.3	51.9	89.2%	0.4%
Dibromochloromethane	< 1.1 U	23.3	52.5	44.4%	25.2	51.9	48.6%	7.8%
1,1,2-Trichloroethane	< 1.1 U	52.1	52.5	99.2%	52.9	51.9	102%	1.5%
Benzene	< 1.1 U	49.0	52.5	93.3%	48.8	51.9	94.0%	0.4%
trans-1,3-Dichloropropene	< 1.1 U	37.1	52.5	70.7%	39.7	51.9	76.5%	6.8%
2-Chloroethylvinylether	< 5.4 U	45.1	52.5	85.9%	46.0	51.9	88.6%	2.0%
Bromoform	< 1.1 U	20.7	52.5	39.4%	22.3	51.9	43.0%	7.4%
4-Methyl-2-Pentanone (MIBK)	< 5.4 U	222	263	84.4%	226	259	87.3%	1.8%
2-Hexanone	< 5.4 U	225	263	85.6%	234	259	90.3%	3.9%
Tetrachloroethene	< 1.1 U	44.9	52.5	85.5%	44.6	51.9	85.9%	0.7%
1,1,2,2-Tetrachloroethane	< 1.1 U	45.1	52.5	85.9%	45.9	51.9	88.4%	1.8%
Toluene	< 1.1 U	47.0	52.5	89.5%	46.9	51.9	90.4%	0.2%
Chlorobenzene	< 1.1 U	43.9	52.5	83.6%	44.3	51.9	85.4%	0.9%
Ethylbenzene	< 1.1 U	46.4	52.5	88.4%	46.4	51.9	89.4%	0.0%
Styrene	< 1.1 U	42.4	52.5	80.8%	43.1	51.9	83.0%	1.6%
Trichlorofluoromethane	< 1.1 U	53.7	52.5	102%	50.2	51.9	96.7%	6.7%
1,1,2-Trichloro-1,2,2-trifl	< 2.2 U	47.3	52.5	90.1%	46.3	51.9	89.2%	2.1%
m,p-Xylene	< 1.1 U	94.0	105	89.5%	90.1	104	86.6%	4.2%
o-Xylene	< 1.1 U	46.0	52.5	87.6%	47.1	51.9	90.8%	2.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: N-M-2005
MATRIX SPIKE

Lab Sample ID: IK93M
LIMS ID: 05-14190
Matrix: Sediment

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
1,2-Dichlorobenzene	< 1.1 U	39.2	52.5	74.7%	39.7	51.9	76.5%	1.3%
1,3-Dichlorobenzene	< 1.1 U	39.4	52.5	75.0%	39.9	51.9	76.9%	1.3%
1,4-Dichlorobenzene	< 1.1 U	37.5	52.5	71.4%	37.8	51.9	72.8%	0.8%
Acrolein	< 53.9 U	< 52.5 U	263	NA	< 51.9 U	259	NA	NA
Methyl Iodide	< 1.1 U	37.0	52.5	70.5%	38.9	51.9	75.0%	5.0%
Bromoethane	< 2.2 U	53.9	52.5	103%	52.1	51.9	100%	3.4%
Acrylonitrile	< 5.4 U	39.4	52.5	75.0%	41.1	51.9	79.2%	4.2%
1,1-Dichloropropene	< 1.1 U	48.0	52.5	91.4%	47.3	51.9	91.1%	1.5%
Dibromomethane	< 1.1 U	62.7	52.5	119%	61.5	51.9	118%	1.9%
1,1,1,2-Tetrachloroethane	< 1.1 U	40.2	52.5	76.6%	41.3	51.9	79.6%	2.7%
1,2-Dibromo-3-chloropropane	< 5.4 U	41.3	52.5	78.7%	41.3	51.9	79.6%	0.0%
1,2,3-Trichloropropane	< 2.2 U	46.8	52.5	89.1%	46.7	51.9	90.0%	0.2%
trans-1,4-Dichloro-2-butene	< 5.4 U	26.0	52.5	49.5%	29.9	51.9	57.6%	14.0%
1,3,5-Trimethylbenzene	< 1.1 U	45.6	52.5	86.9%	44.4	51.9	85.5%	2.7%
1,2,4-Trimethylbenzene	< 1.1 U	45.5	52.5	86.7%	45.3	51.9	87.3%	0.4%
Hexachlorobutadiene	< 5.4 U	28.3	52.5	53.9%	26.9	51.9	51.8%	5.1%
Ethylene Dibromide	< 1.1 U	43.5	52.5	82.9%	44.8	51.9	86.3%	2.9%
Bromochloromethane	< 1.1 U	59.0	52.5	112%	57.7	51.9	111%	2.2%
2,2-Dichloropropane	< 1.1 U	50.4	52.5	96.0%	49.3	51.9	95.0%	2.2%
1,3-Dichloropropane	< 1.1 U	45.7	52.5	87.0%	47.0	51.9	90.6%	2.8%
Isopropylbenzene	< 1.1 U	49.0	52.5	93.3%	48.7	51.9	93.8%	0.6%
n-Propylbenzene	< 1.1 U	43.5	52.5	82.9%	42.7	51.9	82.3%	1.9%
Bromobenzene	< 1.1 U	42.4	52.5	80.8%	42.8	51.9	82.5%	0.9%
2-Chlorotoluene	< 1.1 U	46.0	52.5	87.6%	44.1	51.9	85.0%	4.2%
4-Chlorotoluene	< 1.1 U	43.0	52.5	81.9%	43.0	51.9	82.9%	0.0%
tert-Butylbenzene	< 1.1 U	47.9	52.5	91.2%	47.5	51.9	91.5%	0.8%
sec-Butylbenzene	< 1.1 U	42.7	52.5	81.3%	41.1	51.9	79.2%	3.8%
4-Isopropyltoluene	< 1.1 U	44.7	52.5	85.1%	43.5	51.9	83.8%	2.7%
n-Butylbenzene	< 1.1 U	40.2	52.5	76.6%	38.9	51.9	75.0%	3.3%
1,2,4-Trichlorobenzene	< 5.4 U	28.3	52.5	53.9%	29.4	51.9	56.6%	3.8%
Naphthalene	< 5.4 U	28.8	52.5	54.9%	31.6	51.9	60.9%	9.3%
1,2,3-Trichlorobenzene	< 5.4 U	25.7	52.5	49.0%	27.3	51.9	52.6%	6.0%

Reported in µg/kg (ppb)

NA-No recovery due to high concentration of analyte in original sample, calculated negative recovery, or undetected spike.
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: LCS-082405
LAB CONTROL SAMPLE

Lab Sample ID: LCS-082405
LIMS ID: 05-14178
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: FINN5/PAB
LCSD: FINN5/PAB
Date Analyzed LCS: 08/24/05 10:41
LCSD: 08/24/05 11:17

Sample Amount LCS: 5.00 g-dry-wt
LCSD: 5.00 g-dry-wt
Purge Volume LCS: 5.0 mL
LCSD: 5.0 mL
Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	50.4	50.0	101%	48.0	50.0	96.0%	4.9%
Bromomethane	57.5	50.0	115%	54.9	50.0	110%	4.6%
Vinyl Chloride	56.3	50.0	113%	54.3	50.0	109%	3.6%
Chloroethane	58.2	50.0	116%	56.0	50.0	112%	3.9%
Methylene Chloride	54.9	50.0	110%	53.8	50.0	108%	2.0%
Acetone	275	250	110%	270	250	108%	1.8%
Carbon Disulfide	54.4	50.0	109%	52.4	50.0	105%	3.7%
1,1-Dichloroethene	53.9	50.0	108%	52.5	50.0	105%	2.6%
1,1-Dichloroethane	58.3	50.0	117%	56.8	50.0	114%	2.6%
trans-1,2-Dichloroethene	54.6	50.0	109%	54.3	50.0	109%	0.6%
cis-1,2-Dichloroethene	53.8	50.0	108%	55.8	50.0	112%	3.6%
Chloroform	56.4	50.0	113%	56.8	50.0	114%	0.7%
1,2-Dichloroethane	57.6	50.0	115%	56.4	50.0	113%	2.1%
2-Butanone	274	250	110%	276	250	110%	0.7%
1,1,1-Trichloroethane	58.0	50.0	116%	57.0	50.0	114%	1.7%
Carbon Tetrachloride	56.5	50.0	113%	54.5	50.0	109%	3.6%
Vinyl Acetate	45.9	50.0	91.8%	54.7	50.0	109%	17.5%
Bromodichloromethane	59.4	50.0	119%	57.7	50.0	115%	2.9%
1,2-Dichloropropane	55.3	50.0	111%	54.6	50.0	109%	1.3%
cis-1,3-Dichloropropene	57.1	50.0	114%	55.8	50.0	112%	2.3%
Trichloroethene	57.2	50.0	114%	55.2	50.0	110%	3.6%
Dibromochloromethane	55.6	50.0	111%	54.3	50.0	109%	2.4%
1,1,2-Trichloroethane	57.2	50.0	114%	56.6	50.0	113%	1.1%
Benzene	55.0	50.0	110%	53.6	50.0	107%	2.6%
trans-1,3-Dichloropropene	58.8	50.0	118%	57.4	50.0	115%	2.4%
2-Chloroethylvinylether	53.2	50.0	106%	53.6	50.0	107%	0.7%
Bromoform	53.7	50.0	107%	52.3	50.0	105%	2.6%
4-Methyl-2-Pentanone (MIBK)	285	250	114%	285	250	114%	0.0%
2-Hexanone	285	250	114%	280	250	112%	1.8%
Tetrachloroethene	54.1	50.0	108%	50.6	50.0	101%	6.7%
1,1,2,2-Tetrachloroethane	55.5	50.0	111%	53.5	50.0	107%	3.7%
Toluene	56.8	50.0	114%	54.1	50.0	108%	4.9%
Chlorobenzene	55.9	50.0	112%	53.2	50.0	106%	4.9%
Ethylbenzene	57.5	50.0	115%	55.3	50.0	111%	3.9%
Styrene	57.6	50.0	115%	55.5	50.0	111%	3.7%
Trichlorofluoromethane	60.8	50.0	122%	59.2	50.0	118%	2.7%
1,1,2-Trichloro-1,2,2-trifluoroetha	56.4	50.0	113%	54.8	50.0	110%	2.9%
m,p-Xylene	111	100	111%	106	100	106%	4.6%
o-Xylene	56.4	50.0	113%	54.2	50.0	108%	4.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: LCS-082405
LAB CONTROL SAMPLE

Lab Sample ID: LCS-082405
LIMS ID: 05-14178
Matrix: Sediment

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
1,2-Dichlorobenzene	54.9	50.0	110%	52.3	50.0	105%	4.9%
1,3-Dichlorobenzene	55.9	50.0	112%	53.1	50.0	106%	5.1%
1,4-Dichlorobenzene	56.0	50.0	112%	52.1	50.0	104%	7.2%
Acrolein	271	250	108%	280	250	112%	3.3%
Methyl Iodide	48.7	50.0	97.4%	47.5	50.0	95.0%	2.5%
Bromoethane	54.3	50.0	109%	53.4	50.0	107%	1.7%
Acrylonitrile	55.3	50.0	111%	54.6	50.0	109%	1.3%
1,1-Dichloropropene	58.5	50.0	117%	56.3	50.0	113%	3.8%
Dibromomethane	57.0	50.0	114%	55.6	50.0	111%	2.5%
1,1,1,2-Tetrachloroethane	54.8	50.0	110%	53.5	50.0	107%	2.4%
1,2-Dibromo-3-chloropropane	55.1	50.0	110%	53.2	50.0	106%	3.5%
1,2,3-Trichloropropane	54.3	50.0	109%	52.8	50.0	106%	2.8%
trans-1,4-Dichloro-2-butene	58.2	50.0	116%	57.0	50.0	114%	2.1%
1,3,5-Trimethylbenzene	58.8	50.0	118%	55.4	50.0	111%	6.0%
1,2,4-Trimethylbenzene	59.1	50.0	118%	55.4	50.0	111%	6.5%
Hexachlorobutadiene	55.6	50.0	111%	54.4	50.0	109%	2.2%
Ethylene Dibromide	56.4	50.0	113%	56.4	50.0	113%	0.0%
Bromochloromethane	54.6	50.0	109%	53.5	50.0	107%	2.0%
2,2-Dichloropropane	57.9	50.0	116%	56.7	50.0	113%	2.1%
1,3-Dichloropropane	56.7	50.0	113%	55.5	50.0	111%	2.1%
Isopropylbenzene	58.8	50.0	118%	56.6	50.0	113%	3.8%
n-Propylbenzene	58.9	50.0	118%	55.4	50.0	111%	6.1%
Bromobenzene	52.6	50.0	105%	50.0	50.0	100%	5.1%
2-Chlorotoluene	57.7	50.0	115%	53.2	50.0	106%	8.1%
4-Chlorotoluene	58.3	50.0	117%	56.1	50.0	112%	3.8%
tert-Butylbenzene	57.0	50.0	114%	54.0	50.0	108%	5.4%
sec-Butylbenzene	61.8	50.0	124%	58.5	50.0	117%	5.5%
4-Isopropyltoluene	60.6	50.0	121%	57.3	50.0	115%	5.6%
n-Butylbenzene	65.1	50.0	130%	61.2	50.0	122%	6.2%
1,2,4-Trichlorobenzene	57.3	50.0	115%	54.0	50.0	108%	5.9%
Naphthalene	51.7	50.0	103%	50.6	50.0	101%	2.2%
1,2,3-Trichlorobenzene	53.5	50.0	107%	52.0	50.0	104%	2.8%

Reported in μg/kg (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	108%	110%
d8-Toluene	96.0%	97.7%
Bromofluorobenzene	101%	99.1%
d4-1,2-Dichlorobenzene	93.2%	94.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: LCS-082605
LAB CONTROL SAMPLE

Lab Sample ID: LCS-082605
LIMS ID: 05-14190
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: FINN5/PAB
LCSD: FINN5/PAB
Date Analyzed LCS: 08/26/05 10:08
LCSD: 08/26/05 10:43

Sample Amount LCS: 5.00 g-dry-wt
LCSD: 5.00 g-dry-wt
Purge Volume LCS: 5.0 mL
LCSD: 5.0 mL
Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	51.1	50.0	102%	50.0	50.0	100%	2.2%
Bromomethane	51.1	50.0	102%	50.4	50.0	101%	1.4%
Vinyl Chloride	48.6	50.0	97.2%	48.0	50.0	96.0%	1.2%
Chloroethane	53.3	50.0	107%	51.5	50.0	103%	3.4%
Methylene Chloride	57.9	50.0	116%	57.5	50.0	115%	0.7%
Acetone	256	250	102%	250	250	100%	2.4%
Carbon Disulfide	56.8	50.0	114%	54.4	50.0	109%	4.3%
1,1-Dichloroethene	55.3	50.0	111%	52.4	50.0	105%	5.4%
1,1-Dichloroethane	53.8	50.0	108%	52.3	50.0	105%	2.8%
trans-1,2-Dichloroethene	53.9	50.0	108%	51.9	50.0	104%	3.8%
cis-1,2-Dichloroethene	51.9	50.0	104%	53.6	50.0	107%	3.2%
Chloroform	51.2	50.0	102%	50.6	50.0	101%	1.2%
1,2-Dichloroethane	48.6	50.0	97.2%	48.9	50.0	97.8%	0.6%
2-Butanone	273	250	109%	276	250	110%	1.1%
1,1,1-Trichloroethane	51.8	50.0	104%	50.9	50.0	102%	1.8%
Carbon Tetrachloride	52.0	50.0	104%	51.2	50.0	102%	1.6%
Vinyl Acetate	51.6	50.0	103%	51.4	50.0	103%	0.4%
Bromodichloromethane	52.0	50.0	104%	51.5	50.0	103%	1.0%
1,2-Dichloropropane	53.5	50.0	107%	53.0	50.0	106%	0.9%
cis-1,3-Dichloropropene	54.4	50.0	109%	53.3	50.0	107%	2.0%
Trichloroethene	53.0	50.0	106%	51.8	50.0	104%	2.3%
Dibromochloromethane	52.6	50.0	105%	51.7	50.0	103%	1.7%
1,1,2-Trichloroethane	51.4	50.0	103%	51.9	50.0	104%	1.0%
Benzene	51.7	50.0	103%	51.2	50.0	102%	1.0%
trans-1,3-Dichloropropene	52.8	50.0	106%	52.0	50.0	104%	1.5%
2-Chloroethylvinylether	59.3	50.0	119%	56.8	50.0	114%	4.3%
Bromoform	52.6	50.0	105%	52.3	50.0	105%	0.6%
4-Methyl-2-Pentanone (MIBK)	253	250	101%	252	250	101%	0.4%
2-Hexanone	290	250	116%	290	250	116%	0.0%
Tetrachloroethene	53.3	50.0	107%	51.6	50.0	103%	3.2%
1,1,2,2-Tetrachloroethane	51.3	50.0	103%	50.8	50.0	102%	1.0%
Toluene	51.8	50.0	104%	50.6	50.0	101%	2.3%
Chlorobenzene	53.3	50.0	107%	52.8	50.0	106%	0.9%
Ethylbenzene	52.7	50.0	105%	51.7	50.0	103%	1.9%
Styrene	55.3	50.0	111%	54.0	50.0	108%	2.4%
Trichlorofluoromethane	52.0	50.0	104%	50.3	50.0	101%	3.3%
1,1,2-Trichloro-1,2,2-trifluoroetha	54.1	50.0	108%	51.7	50.0	103%	4.5%
m,p-Xylene	111	100	111%	104	100	104%	6.5%
o-Xylene	54.3	50.0	109%	53.5	50.0	107%	1.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: LCS-082605
LAB CONTROL SAMPLE

Lab Sample ID: LCS-082605
LIMS ID: 05-14190
Matrix: Sediment

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
1,2-Dichlorobenzene	52.8	50.0	106%	52.3	50.0	105%	1.0%
1,3-Dichlorobenzene	54.7	50.0	109%	52.6	50.0	105%	3.9%
1,4-Dichlorobenzene	53.2	50.0	106%	51.5	50.0	103%	3.2%
Acrolein	255	250	102%	254	250	102%	0.4%
Methyl Iodide	54.8	50.0	110%	54.6	50.0	109%	0.4%
Bromoethane	57.4	50.0	115%	56.3	50.0	113%	1.9%
Acrylonitrile	52.3	50.0	105%	52.7	50.0	105%	0.8%
1,1-Dichloropropene	53.5	50.0	107%	51.9	50.0	104%	3.0%
Dibromomethane	51.4	50.0	103%	50.9	50.0	102%	1.0%
1,1,1,2-Tetrachloroethane	52.4	50.0	105%	51.6	50.0	103%	1.5%
1,2-Dibromo-3-chloropropane	53.1	50.0	106%	53.2	50.0	106%	0.2%
1,2,3-Trichloropropane	50.9	50.0	102%	52.1	50.0	104%	2.3%
trans-1,4-Dichloro-2-butene	53.4	50.0	107%	54.2	50.0	108%	1.5%
1,3,5-Trimethylbenzene	55.3	50.0	111%	53.8	50.0	108%	2.7%
1,2,4-Trimethylbenzene	55.0	50.0	110%	53.4	50.0	107%	3.0%
Hexachlorobutadiene	57.8	50.0	116%	55.4	50.0	111%	4.2%
Ethylene Dibromide	51.5	50.0	103%	52.0	50.0	104%	1.0%
Bromochloromethane	52.4	50.0	105%	51.1	50.0	102%	2.5%
2,2-Dichloropropane	52.8	50.0	106%	52.1	50.0	104%	1.3%
1,3-Dichloropropane	51.9	50.0	104%	51.6	50.0	103%	0.6%
Isopropylbenzene	54.9	50.0	110%	54.0	50.0	108%	1.7%
n-Propylbenzene	55.3	50.0	111%	52.9	50.0	106%	4.4%
Bromobenzene	52.1	50.0	104%	51.4	50.0	103%	1.4%
2-Chlorotoluene	52.3	50.0	105%	48.8	50.0	97.6%	6.9%
4-Chlorotoluene	56.1	50.0	112%	55.0	50.0	110%	2.0%
tert-Butylbenzene	55.7	50.0	111%	54.4	50.0	109%	2.4%
sec-Butylbenzene	56.7	50.0	113%	54.4	50.0	109%	4.1%
4-Isopropyltoluene	56.6	50.0	113%	55.1	50.0	110%	2.7%
n-Butylbenzene	57.7	50.0	115%	55.2	50.0	110%	4.4%
1,2,4-Trichlorobenzene	57.0	50.0	114%	55.7	50.0	111%	2.3%
Naphthalene	54.8	50.0	110%	56.5	50.0	113%	3.1%
1,2,3-Trichlorobenzene	54.8	50.0	110%	54.5	50.0	109%	0.5%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	100%	104%
d8-Toluene	94.7%	94.7%
Bromofluorobenzene	90.1%	91.1%
d4-1,2-Dichlorobenzene	92.6%	92.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: LCS-082705
LAB CONTROL SAMPLE

Lab Sample ID: LCS-082705
LIMS ID: 05-14197
Matrix: Sediment
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: FINN5/PAB
LCSD: FINN5/PAB
Date Analyzed LCS: 08/27/05 12:21
LCSD: 08/27/05 12:57

Sample Amount LCS: 5.00 g-dry-wt
LCSD: 5.00 g-dry-wt
Purge Volume LCS: 5.0 mL
LCSD: 5.0 mL
Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	48.4	50.0	96.8%	48.8	50.0	97.6%	0.8%
Bromomethane	50.6	50.0	101%	52.5	50.0	105%	3.7%
Vinyl Chloride	53.4	50.0	107%	53.6	50.0	107%	0.4%
Chloroethane	56.3	50.0	113%	57.3	50.0	115%	1.8%
Methylene Chloride	56.8	50.0	114%	58.5	50.0	117%	2.9%
Acetone	265	250	106%	261	250	104%	1.5%
Carbon Disulfide	56.5	50.0	113%	56.2	50.0	112%	0.5%
1,1-Dichloroethene	52.5	50.0	105%	52.8	50.0	106%	0.6%
1,1-Dichloroethane	54.8	50.0	110%	56.0	50.0	112%	2.2%
trans-1,2-Dichloroethene	52.4	50.0	105%	53.0	50.0	106%	1.1%
cis-1,2-Dichloroethene	54.5	50.0	109%	52.2	50.0	104%	4.3%
Chloroform	53.0	50.0	106%	53.8	50.0	108%	1.5%
1,2-Dichloroethane	50.1	50.0	100%	50.6	50.0	101%	1.0%
2-Butanone	275	250	110%	286	250	114%	3.9%
1,1,1-Trichloroethane	52.5	50.0	105%	53.5	50.0	107%	1.9%
Carbon Tetrachloride	53.0	50.0	106%	52.7	50.0	105%	0.6%
Vinyl Acetate	52.5	50.0	105%	55.4	50.0	111%	5.4%
Bromodichloromethane	53.5	50.0	107%	53.0	50.0	106%	0.9%
1,2-Dichloropropane	55.1	50.0	110%	55.0	50.0	110%	0.2%
cis-1,3-Dichloropropene	55.5	50.0	111%	54.9	50.0	110%	1.1%
Trichloroethene	53.2	50.0	106%	52.5	50.0	105%	1.3%
Dibromochloromethane	50.1	50.0	100%	51.1	50.0	102%	2.0%
1,1,2-Trichloroethane	52.9	50.0	106%	52.8	50.0	106%	0.2%
Benzene	52.7	50.0	105%	52.3	50.0	105%	0.8%
trans-1,3-Dichloropropene	53.3	50.0	107%	53.8	50.0	108%	0.9%
2-Chloroethylvinylether	54.6	50.0	109%	57.5	50.0	115%	5.2%
Bromoform	50.2	50.0	100%	50.8	50.0	102%	1.2%
4-Methyl-2-Pentanone (MIBK)	253	250	101%	258	250	103%	2.0%
2-Hexanone	278	250	111%	293	250	117%	5.3%
Tetrachloroethene	50.1	50.0	100%	50.4	50.0	101%	0.6%
1,1,2,2-Tetrachloroethane	48.6	50.0	97.2%	50.4	50.0	101%	3.6%
Toluene	52.3	50.0	105%	52.1	50.0	104%	0.4%
Chlorobenzene	51.6	50.0	103%	52.6	50.0	105%	1.9%
Ethylbenzene	52.4	50.0	105%	52.3	50.0	105%	0.2%
Styrene	53.8	50.0	108%	53.6	50.0	107%	0.4%
Trichlorofluoromethane	55.8	50.0	112%	54.8	50.0	110%	1.8%
1,1,2-Trichloro-1,2,2-trifluoroetha	66.4	50.0	133%	51.4	50.0	103%	25.5%
m,p-Xylene	107	100	107%	105	100	105%	1.9%
o-Xylene	51.8	50.0	104%	52.8	50.0	106%	1.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Sample ID: LCS-082705
LAB CONTROL SAMPLE

Lab Sample ID: LCS-082705
LIMS ID: 05-14197
Matrix: Sediment

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
1,2-Dichlorobenzene	50.8	50.0	102%	50.9	50.0	102%	0.2%
1,3-Dichlorobenzene	52.1	50.0	104%	51.0	50.0	102%	2.1%
1,4-Dichlorobenzene	51.4	50.0	103%	50.1	50.0	100%	2.6%
Acrolein	319	250	128%	256	250	102%	21.9%
Methyl Iodide	49.6	50.0	99.2%	51.7	50.0	103%	4.1%
Bromoethane	54.6	50.0	109%	56.3	50.0	113%	3.1%
Acrylonitrile	52.8	50.0	106%	55.1	50.0	110%	4.3%
1,1-Dichloropropene	54.2	50.0	108%	53.3	50.0	107%	1.7%
Dibromomethane	51.9	50.0	104%	52.3	50.0	105%	0.8%
1,1,1,2-Tetrachloroethane	50.8	50.0	102%	51.3	50.0	103%	1.0%
1,2-Dibromo-3-chloropropane	49.6	50.0	99.2%	52.0	50.0	104%	4.7%
1,2,3-Trichloropropane	48.7	50.0	97.4%	49.7	50.0	99.4%	2.0%
trans-1,4-Dichloro-2-butene	52.3	50.0	105%	53.8	50.0	108%	2.8%
1,3,5-Trimethylbenzene	52.6	50.0	105%	52.3	50.0	105%	0.6%
1,2,4-Trimethylbenzene	53.3	50.0	107%	53.1	50.0	106%	0.4%
Hexachlorobutadiene	47.3	50.0	94.6%	50.7	50.0	101%	6.9%
Ethylene Dibromide	53.0	50.0	106%	53.6	50.0	107%	1.1%
Bromochloromethane	50.8	50.0	102%	52.1	50.0	104%	2.5%
2,2-Dichloropropane	53.8	50.0	108%	54.6	50.0	109%	1.5%
1,3-Dichloropropane	50.1	50.0	100%	51.3	50.0	103%	2.4%
Isopropylbenzene	52.7	50.0	105%	52.5	50.0	105%	0.4%
n-Propylbenzene	53.9	50.0	108%	52.2	50.0	104%	3.2%
Bromobenzene	49.9	50.0	99.8%	49.4	50.0	98.8%	1.0%
2-Chlorotoluene	52.4	50.0	105%	50.4	50.0	101%	3.9%
4-Chlorotoluene	53.2	50.0	106%	53.0	50.0	106%	0.4%
tert-Butylbenzene	53.9	50.0	108%	53.1	50.0	106%	1.5%
sec-Butylbenzene	53.9	50.0	108%	53.0	50.0	106%	1.7%
4-Isopropyltoluene	54.2	50.0	108%	53.4	50.0	107%	1.5%
n-Butylbenzene	55.4	50.0	111%	54.3	50.0	109%	2.0%
1,2,4-Trichlorobenzene	51.3	50.0	103%	52.2	50.0	104%	1.7%
Naphthalene	49.9	50.0	99.8%	53.0	50.0	106%	6.0%
1,2,3-Trichlorobenzene	48.4	50.0	96.8%	50.8	50.0	102%	4.8%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	111%	114%
d8-Toluene	100%	100%
Bromofluorobenzene	92.0%	92.5%
d4-1,2-Dichlorobenzene	92.1%	91.3%

SEMIVOLATILE ORGANIC COMPOUNDS

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: A-2-M-2005
SAMPLE

Lab Sample ID: IK93L
LIMS ID: 05-14189
Matrix: Sediment
Date Analyzed: 08/31/05 00:37

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	96	< 96 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	< 19 U
100-01-6	4-Nitroaniline	96	< 96 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	96	< 96 U
85-01-8	Phenanthrene	19	< 19 U
86-74-8	Carbazole	19	< 19 U
120-12-7	Anthracene	19	< 19 U
84-74-2	**Di-n-Butylphthalate**	**19**	**65** U
206-44-0	**Fluoranthene**	**19**	**30**
129-00-0	**Pyrene**	**19**	**48**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	96	< 96 U
56-55-3	Benzo(a)anthracene	19	< 19 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**39 B** U
218-01-9	**Chrysene**	**19**	**19**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	Benzo(b)fluoranthene	19	< 19 U J
207-08-9	Benzo(k)fluoranthene	19	< 19 U J
50-32-8	**Benzo(a)pyrene**	**19**	**23** J
193-39-5	Indeno(1,2,3-cd)pyrene	19	< 19 U
53-70-3	Dibenz(a,h)anthracene	19	< 19 U J
191-24-2	Benzo(g,h,i)perylene	19	< 19 U J

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	66.8%	2-Fluorobiphenyl	64.8%
d14-p-Terphenyl	103%	d4-1,2-Dichlorobenzene	65.6%
d5-Phenol	59.2%	2-Fluorophenol	45.6%
2,4,6-Tribromophenol	86.7%	d4-2-Chlorophenol	67.2%

EJB
9/12/05

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: A-2-M-2005
DILUTION

Lab Sample ID: IK93L
LIMS ID: 05-14189
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/29/05 23:09
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 26.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 3.00
Percent Moisture: 19.8%
pH: 6.1

CAS Number	Analyte	RL	Result
108-95-2	Phenol	57	< 57 U
111-44-4	Bis-(2-Chloroethyl) Ether	57	< 57 U
95-57-8	2-Chlorophenol	57	< 57 U
541-73-1	1,3-Dichlorobenzene	57	< 57 U
106-46-7	1,4-Dichlorobenzene	57	< 57 U
100-51-6	Benzyl Alcohol	57	< 57 U
95-50-1	1,2-Dichlorobenzene	57	< 57 U
95-48-7	2-Methylphenol	57	< 57 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	57	< 57 U
106-44-5	4-Methylphenol	57	< 57 U
621-64-7	N-Nitroso-Di-N-Propylamine	290	< 290 U
67-72-1	Hexachloroethane	57	< 57 U
98-95-3	Nitrobenzene	57	< 57 U
78-59-1	Isophorone	57	< 57 U
88-75-5	2-Nitrophenol	290	< 290 U
105-67-9	2,4-Dimethylphenol	57	< 57 U
65-85-0	Benzoic Acid	570	< 570 U
111-91-1	bis(2-Chloroethoxy) Methane	57	< 57 U
120-83-2	2,4-Dichlorophenol	290	< 290 U
120-82-1	1,2,4-Trichlorobenzene	57	< 57 U
91-20-3	Naphthalene	57	< 57 U
106-47-8	4-Chloroaniline	290	< 290 U
87-68-3	Hexachlorobutadiene	57	< 57 U
59-50-7	4-Chloro-3-methylphenol	290	< 290 U
91-57-6	2-Methylnaphthalene	57	< 57 U
77-47-4	Hexachlorocyclopentadiene	290	< 290 U
88-06-2	2,4,6-Trichlorophenol	290	< 290 U
95-95-4	2,4,5-Trichlorophenol	290	< 290 U
91-58-7	2-Chloronaphthalene	57	< 57 U
88-74-4	2-Nitroaniline	290	< 290 U
131-11-3	Dimethylphthalate	57	< 57 U
208-96-8	Acenaphthylene	57	< 57 U
99-09-2	3-Nitroaniline	290	< 290 U
83-32-9	Acenaphthene	57	< 57 U
51-28-5	2,4-Dinitrophenol	570	< 570 U
100-02-7	4-Nitrophenol	290	< 290 U
132-64-9	Dibenzofuran	57	< 57 U
606-20-2	2,6-Dinitrotoluene	290	< 290 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: A-2-M-2005
DILUTION

Lab Sample ID: IK93L
LIMS ID: 05-14189
Matrix: Sediment
Date Analyzed: 08/29/05 23:09

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	290	< 290 U
84-66-2	Diethylphthalate	57	< 57 U
7005-72-3	4-Chlorophenyl-phenylether	57	< 57 U
86-73-7	Fluorene	57	< 57 U
100-01-6	4-Nitroaniline	290	< 290 U
534-52-1	4,6-Dinitro-2-Methylphenol	570	< 570 U
86-30-6	N-Nitrosodiphenylamine	57	< 57 U
101-55-3	4-Bromophenyl-phenylether	57	< 57 U
118-74-1	Hexachlorobenzene	57	< 57 U
87-86-5	Pentachlorophenol	290	< 290 U
85-01-8	Phenanthrene	57	< 57 U
86-74-8	Carbazole	57	< 57 U
120-12-7	Anthracene	57	< 57 U
84-74-2	**Di-n-Butylphthalate**	**57**	**68** U
206-44-0	Fluoranthene	57	< 57 U
129-00-0	Pyrene	57	< 57 U
85-68-7	Butylbenzylphthalate	57	< 57 U
91-94-1	3,3'-Dichlorobenzidine	290	< 290 U
56-55-3	Benzo(a)anthracene	57	< 57 U
117-81-7	bis(2-Ethylhexyl)phthalate	57	< 57 U
218-01-9	Chrysene	57	< 57 U
117-84-0	Di-n-Octyl phthalate	57	< 57 U
205-99-2	Benzo(b)fluoranthene	57	< 57 U
207-08-9	Benzo(k)fluoranthene	57	< 57 U
50-32-8	Benzo(a)pyrene	57	< 57 U
193-39-5	Indeno(1,2,3-cd)pyrene	57	< 57 U
53-70-3	Dibenz(a,h)anthracene	57	< 57 U
191-24-2	Benzo(g,h,i)perylene	57	< 57 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	65.5%	2-Fluorobiphenyl	63.6%
d14-p-Terphenyl	65.0%	d4-1,2-Dichlorobenzene	65.5%
d5-Phenol	46.1%	2-Fluorophenol	51.6%
2,4,6-Tribromophenol	67.6%	d4-2-Chlorophenol	57.4%

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9/12/05

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: AB-M-2005
SAMPLE

Lab Sample ID: IK93T
LIMS ID: 05-14197
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/30/05 20:48
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 26.0 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 17.2%
pH: 6.8

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	96	< 96 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	96	< 96 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	96	< 96 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	96	< 96 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	96	< 96 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	96	< 96 U
88-06-2	2,4,6-Trichlorophenol	96	< 96 U
95-95-4	2,4,5-Trichlorophenol	96	< 96 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	96	< 96 U
131-11-3	**Dimethylphthalate**	**19**	**57**
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	96	< 96 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	96	< 96 U
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	96	< 96 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: AB-M-2005
SAMPLE

Lab Sample ID: IK93T
LIMS ID: 05-14197
Matrix: Sediment
Date Analyzed: 08/30/05 20:48

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	96	< 96 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	< 19 U
100-01-6	4-Nitroaniline	96	< 96 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	96	< 96 U
85-01-8	Phenanthrene	19	< 19 U
86-74-8	Carbazole	19	< 19 U
120-12-7	Anthracene	19	< 19 U
84-74-2	**Di-n-Butylphthalate**	**19**	**25** U
206-44-0	**Fluoranthene**	**19**	**20**
129-00-0	**Pyrene**	**19**	**28**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	96	< 96 U
56-55-3	Benzo(a)anthracene	19	< 19 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**22 B** U
218-01-9	Chrysene	19	< 19 U
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	Benzo(b)fluoranthene	19	< 19 U
207-08-9	Benzo(k)fluoranthene	19	< 19 U
50-32-8	Benzo(a)pyrene	19	< 19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19	< 19 U
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	Benzo(g,h,i)perylene	19	< 19 U

Reported in μg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	66.4%	2-Fluorobiphenyl	64.0%
d14-p-Terphenyl	83.6%	d4-1,2-Dichlorobenzene	63.6%
d5-Phenol	57.1%	2-Fluorophenol	57.6%
2,4,6-Tribromophenol	85.6%	d4-2-Chlorophenol	65.3%

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9/12/05

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: AB-M-2005
DILUTION

Lab Sample ID: IK93T
LIMS ID: 05-14197
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 09/02/05 12:01
Instrument/Analyst: NT4/LJR
GPC Cleanup: No

Sample Amount: 26.0 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 5.00
Percent Moisture: 17.2%
pH: 6.8

CAS Number	Analyte	RL	Result
108-95-2	Phenol	96	< 96 U
111-44-4	Bis-(2-Chloroethyl) Ether	96	< 96 U
95-57-8	2-Chlorophenol	96	< 96 U
541-73-1	1,3-Dichlorobenzene	96	< 96 U
106-46-7	1,4-Dichlorobenzene	96	< 96 U
100-51-6	Benzyl Alcohol	96	< 96 U
95-50-1	1,2-Dichlorobenzene	96	< 96 U
95-48-7	2-Methylphenol	96	< 96 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	96	< 96 U
106-44-5	4-Methylphenol	96	< 96 U
621-64-7	N-Nitroso-Di-N-Propylamine	480	< 480 U
67-72-1	Hexachloroethane	96	< 96 U
98-95-3	Nitrobenzene	96	< 96 U
78-59-1	Isophorone	96	< 96 U
88-75-5	2-Nitrophenol	480	< 480 U
105-67-9	2,4-Dimethylphenol	96	< 96 U
65-85-0	Benzoic Acid	960	< 960 U
111-91-1	bis(2-Chloroethoxy) Methane	96	< 96 U
120-83-2	2,4-Dichlorophenol	480	< 480 U
120-82-1	1,2,4-Trichlorobenzene	96	< 96 U
91-20-3	Naphthalene	96	< 96 U
106-47-8	4-Chloroaniline	480	< 480 U
87-68-3	Hexachlorobutadiene	96	< 96 U
59-50-7	4-Chloro-3-methylphenol	480	< 480 U
91-57-6	2-Methylnaphthalene	96	< 96 U
77-47-4	Hexachlorocyclopentadiene	480	< 480 U
88-06-2	2,4,6-Trichlorophenol	480	< 480 U
95-95-4	2,4,5-Trichlorophenol	480	< 480 U
91-58-7	2-Chloronaphthalene	96	< 96 U
88-74-4	2-Nitroaniline	480	< 480 U
131-11-3	Dimethylphthalate	96	< 96 U
208-96-8	Acenaphthylene	96	< 96 U
99-09-2	3-Nitroaniline	480	< 480 U
83-32-9	Acenaphthene	96	< 96 U
51-28-5	2,4-Dinitrophenol	960	< 960 U
100-02-7	4-Nitrophenol	480	< 480 U
132-64-9	Dibenzofuran	96	< 96 U
606-20-2	2,6-Dinitrotoluene	480	< 480 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: AB-M-2005
DILUTION

Lab Sample ID: IK93T
LIMS ID: 05-14197
Matrix: Sediment
Date Analyzed: 09/02/05 12:01

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	480	< 480 U
84-66-2	Diethylphthalate	96	< 96 U
7005-72-3	4-Chlorophenyl-phenylether	96	< 96 U
86-73-7	Fluorene	96	< 96 U
100-01-6	4-Nitroaniline	480	< 480 U
534-52-1	4,6-Dinitro-2-Methylphenol	960	< 960 U
86-30-6	N-Nitrosodiphenylamine	96	< 96 U
101-55-3	4-Bromophenyl-phenylether	96	< 96 U
118-74-1	Hexachlorobenzene	96	< 96 U
87-86-5	Pentachlorophenol	480	< 480 U
85-01-8	Phenanthrene	96	< 96 U
86-74-8	Carbazole	96	< 96 U
120-12-7	Anthracene	96	< 96 U
84-74-2	Di-n-Butylphthalate	96	< 96 U
206-44-0	Fluoranthene	96	< 96 U
129-00-0	Pyrene	96	< 96 U
85-68-7	Butylbenzylphthalate	96	< 96 U
91-94-1	3,3'-Dichlorobenzidine	480	< 480 U
56-55-3	Benzo(a)anthracene	96	< 96 U
117-81-7	bis(2-Ethylhexyl)phthalate	96	< 96 U
218-01-9	Chrysene	96	< 96 U
117-84-0	Di-n-Octyl phthalate	96	< 96 U
205-99-2	Benzo(b)fluoranthene	96	< 96 U
207-08-9	Benzo(k)fluoranthene	96	< 96 U
50-32-8	Benzo(a)pyrene	96	< 96 U
193-39-5	Indeno(1,2,3-cd)pyrene	96	< 96 U
53-70-3	Dibenz(a,h)anthracene	96	< 96 U
191-24-2	Benzo(g,h,i)perylene	96	< 96 U

Reported in μg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	68.2%	2-Fluorobiphenyl	66.8%
d14-p-Terphenyl	62.4%	d4-1,2-Dichlorobenzene	56.6%
d5-Phenol	64.5%	2-Fluorophenol	69.5%
2,4,6-Tribromophenol	62.7%	d4-2-Chlorophenol	63.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: B-2-M-2005
SAMPLE

Lab Sample ID: IK93U
LIMS ID: 05-14198
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/30/05 17:32
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 26.0 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 14.6%
pH: 6.8

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	96	< 96 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	96	< 96 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	96	< 96 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	96	< 96 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	96	< 96 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	96	< 96 U
88-06-2	2,4,6-Trichlorophenol	96	< 96 U
95-95-4	2,4,5-Trichlorophenol	96	< 96 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	96	< 96 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	96	< 96 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	96	< 96 U
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	96	< 96 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: B-2-M-2005
SAMPLE

Lab Sample ID: IK93U
LIMS ID: 05-14198
Matrix: Sediment
Date Analyzed: 08/30/05 17:32

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	96	< 96 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	< 19 U
100-01-6	4-Nitroaniline	96	< 96 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	96	< 96 U
85-01-8	**Phenanthrene**	**19**	**31**
86-74-8	Carbazole	19	< 19 U
120-12-7	Anthracene	19	< 19 U
84-74-2	**Di-n-Butylphthalate**	**19**	**30 B** U
206-44-0	**Fluoranthene**	**19**	**42**
129-00-0	**Pyrene**	**19**	**44**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	96	< 96 U
56-55-3	**Benzo(a)anthracene**	**19**	**20**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**72 B** U
218-01-9	**Chrysene**	**19**	**30**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**28**
207-08-9	Benzo(k)fluoranthene	19	< 19 U
50-32-8	**Benzo(a)pyrene**	**19**	**25**
193-39-5	Indeno(1,2,3-cd)pyrene	19	< 19 U
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	Benzo(g,h,i)perylene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	61.6%	2-Fluorobiphenyl	63.6%
d14-p-Terphenyl	50.4%	d4-1,2-Dichlorobenzene	57.6%
d5-Phenol	58.1%	2-Fluorophenol	55.5%
2,4,6-Tribromophenol	63.7%	d4-2-Chlorophenol	63.5%

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9/12/05

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: CD-M-2005
SAMPLE

Lab Sample ID: IK93S
LIMS ID: 05-14196
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/30/05 20:15
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 21.0%
pH: 6.4

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	99	< 99 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	99	< 99 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	99	< 99 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	99	< 99 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	99	< 99 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	99	< 99 U
88-06-2	2,4,6-Trichlorophenol	99	< 99 U
95-95-4	2,4,5-Trichlorophenol	99	< 99 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	99	< 99 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	99	< 99 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	99	< 99 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	99	< 99 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: CD-M-2005
SAMPLE

Lab Sample ID: IK93S
LIMS ID: 05-14196
Matrix: Sediment
Date Analyzed: 08/30/05 20:15

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	99	< 99 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	99	< 99 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	99	< 99 U
85-01-8	**Phenanthrene**	**20**	**32**
86-74-8	Carbazole	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	**Di-n-Butylphthalate**	**20**	**31** U
206-44-0	**Fluoranthene**	**20**	**68**
129-00-0	**Pyrene**	**20**	**71**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	99	< 99 U
56-55-3	**Benzo(a)anthracene**	**20**	**25**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**70 B** U
218-01-9	**Chrysene**	**20**	**36**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**40**
207-08-9	**Benzo(k)fluoranthene**	**20**	**23**
50-32-8	**Benzo(a)pyrene**	**20**	**34**
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	70.8%	2-Fluorobiphenyl	71.6%
d14-p-Terphenyl	80.8%	d4-1,2-Dichlorobenzene	64.0%
d5-Phenol	66.1%	2-Fluorophenol	62.1%
2,4,6-Tribromophenol	99.7%	d4-2-Chlorophenol	71.5%

EJB
9/12/05

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: E-M-2005
SAMPLE

Lab Sample ID: IK93R
LIMS ID: 05-14195
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/30/05 19:43
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 19.3%
pH: 6.7

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	98	< 98 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: E-M-2005
SAMPLE

Lab Sample ID: IK93R
LIMS ID: 05-14195
Matrix: Sediment
Date Analyzed: 08/30/05 19:43

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	**Phenanthrene**	**20**	**35**
86-74-8	Carbazole	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	**Di-n-Butylphthalate**	**20**	**80** U
206-44-0	**Fluoranthene**	**20**	**74**
129-00-0	**Pyrene**	**20**	**73**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**24**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**42 B** U
218-01-9	**Chrysene**	**20**	**32**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**35**
207-08-9	**Benzo(k)fluoranthene**	**20**	**20**
50-32-8	**Benzo(a)pyrene**	**20**	**32**
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	69.2%	2-Fluorobiphenyl	68.4%
d14-p-Terphenyl	68.4%	d4-1,2-Dichlorobenzene	64.8%
d5-Phenol	59.7%	2-Fluorophenol	46.4%
2,4,6-Tribromophenol	88.5%	d4-2-Chlorophenol	66.1%

EJB
9/12/05

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: F-1-M-2005
SAMPLE

Lab Sample ID: IK93P
LIMS ID: 05-14193
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/30/05 18:37
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 15.7%
pH: 6.6

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	97	< 97 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: F-1-M-2005
SAMPLE

Lab Sample ID: IK93P
LIMS ID: 05-14193
Matrix: Sediment
Date Analyzed: 08/30/05 18:37

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	< 19 U
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	Phenanthrene	19	< 19 U
86-74-8	Carbazole	19	< 19 U
120-12-7	Anthracene	19	< 19 U
84-74-2	**Di-n-Butylphthalate**	**19**	**27** U
206-44-0	**Fluoranthene**	**19**	**38**
129-00-0	**Pyrene**	**19**	**32**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	Benzo(a)anthracene	19	< 19 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**21 B** U
218-01-9	Chrysene	19	< 19 U
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	Benzo(b)fluoranthene	19	< 19 U
207-08-9	Benzo(k)fluoranthene	19	< 19 U
50-32-8	Benzo(a)pyrene	19	< 19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19	< 19 U
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	Benzo(g,h,i)perylene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	69.2%	2-Fluorobiphenyl	72.0%
d14-p-Terphenyl	62.4%	d4-1,2-Dichlorobenzene	64.8%
d5-Phenol	61.9%	2-Fluorophenol	54.1%
2,4,6-Tribromophenol	84.0%	d4-2-Chlorophenol	67.2%

EJB
9/12/05

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: FD-1-M-2005
SAMPLE

Lab Sample ID: IK93Q
LIMS ID: 05-14194
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/30/05 19:10
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 16.6%
pH: 6.8

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	99	< 99 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	99	< 99 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	99	< 99 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	99	< 99 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	99	< 99 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	99	< 99 U
88-06-2	2,4,6-Trichlorophenol	99	< 99 U
95-95-4	2,4,5-Trichlorophenol	99	< 99 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	99	< 99 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	99	< 99 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	99	< 99 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	99	< 99 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: FD-1-M-2005
SAMPLE

Lab Sample ID: IK93Q
LIMS ID: 05-14194
Matrix: Sediment
Date Analyzed: 08/30/05 19:10

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	99	< 99 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	99	< 99 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	99	< 99 U
85-01-8	Phenanthrene	20	< 20 U
86-74-8	Carbazole	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	**Di-n-Butylphthalate**	**20**	**140** U
206-44-0	**Fluoranthene**	**20**	**41**
129-00-0	**Pyrene**	**20**	**39**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	99	< 99 U
56-55-3	Benzo(a)anthracene	20	< 20 U
117-81-7	bis(2-Ethylhexyl)phthalate	20	< 20 U
218-01-9	**Chrysene**	**20**	**24**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**33**
207-08-9	Benzo(k)fluoranthene	20	< 20 U
50-32-8	**Benzo(a)pyrene**	**20**	**28**
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	67.6%	2-Fluorobiphenyl	71.6%
d14-p-Terphenyl	66.0%	d4-1,2-Dichlorobenzene	60.4%
d5-Phenol	62.9%	2-Fluorophenol	40.5%
2,4,6-Tribromophenol	90.9%	d4-2-Chlorophenol	67.2%

EJB
9/12/05

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: F-2-M-2005
SAMPLE

Lab Sample ID: IK93O
LIMS ID: 05-14192
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/30/05 18:05
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 17.6%
pH: 6.7

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	98	< 98 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: F-2-M-2005
SAMPLE

Lab Sample ID: IK930
LIMS ID: 05-14192
Matrix: Sediment
Date Analyzed: 08/30/05 18:05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	Phenanthrene	20	< 20 U
86-74-8	Carbazole	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	**Di-n-Butylphthalate**	**20**	**23** U
206-44-0	**Fluoranthene**	**20**	**29**
129-00-0	**Pyrene**	**20**	**25**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	Benzo(a)anthracene	20	< 20 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**24 B** U
218-01-9	Chrysene	20	< 20 U
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	Benzo(b)fluoranthene	20	< 20 U
207-08-9	Benzo(k)fluoranthene	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	73.2%	2-Fluorobiphenyl	73.2%
d14-p-Terphenyl	66.8%	d4-1,2-Dichlorobenzene	66.4%
d5-Phenol	65.3%	2-Fluorophenol	48.0%
2,4,6-Tribromophenol	90.1%	d4-2-Chlorophenol	71.5%

EJB
9/12/08

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: G-M-2005
SAMPLE

Lab Sample ID: IK93K
LIMS ID: 05-14188
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/31/05 00:05
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 26.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 16.8%
pH: 6.7

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	95	< 95 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	95	< 95 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	95	< 95 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	95	< 95 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	95	< 95 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	95	< 95 U
88-06-2	2,4,6-Trichlorophenol	95	< 95 U
95-95-4	2,4,5-Trichlorophenol	95	< 95 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	95	< 95 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	95	< 95 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	95	< 95 U
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	95	< 95 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: G-M-2005
SAMPLE

Lab Sample ID: IK93K
LIMS ID: 05-14188
Matrix: Sediment
Date Analyzed: 08/31/05 00:05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	95	< 95 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	< 19 U
100-01-6	4-Nitroaniline	95	< 95 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	95	< 95 U
85-01-8	Phenanthrene	19	< 19 U
86-74-8	Carbazole	19	< 19 U
120-12-7	Anthracene	19	< 19 U
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**23**
129-00-0	**Pyrene**	**19**	**35**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	95	< 95 U
56-55-3	Benzo(a)anthracene	19	< 19 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**72 B** U
218-01-9	Chrysene	19	< 19 U
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	Benzo(b)fluoranthene	19	< 19 U J
207-08-9	Benzo(k)fluoranthene	19	< 19 U J
50-32-8	Benzo(a)pyrene	19	< 19 U J
193-39-5	Indeno(1,2,3-cd)pyrene	19	< 19 U
53-70-3	Dibenz(a,h)anthracene	19	< 19 U J
191-24-2	Benzo(g,h,i)perylene	19	< 19 U J

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	69.2%	2-Fluorobiphenyl	63.6%
d14-p-Terphenyl	108%	d4-1,2-Dichlorobenzene	64.4%
d5-Phenol	64.0%	2-Fluorophenol	49.1%
2,4,6-Tribromophenol	97.6%	d4-2-Chlorophenol	69.6%

EJB
9/12/05

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: G-M-2005
DILUTION

Lab Sample ID: IK93K
LIMS ID: 05-14188
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/29/05 22:37
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 26.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 3.00
Percent Moisture: 16.8%
pH: 6.7

CAS Number	Analyte	RL	Result
108-95-2	Phenol	57	< 57 U
111-44-4	Bis-(2-Chloroethyl) Ether	57	< 57 U
95-57-8	2-Chlorophenol	57	< 57 U
541-73-1	1,3-Dichlorobenzene	57	< 57 U
106-46-7	1,4-Dichlorobenzene	57	< 57 U
100-51-6	Benzyl Alcohol	57	< 57 U
95-50-1	1,2-Dichlorobenzene	57	< 57 U
95-48-7	2-Methylphenol	57	< 57 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	57	< 57 U
106-44-5	4-Methylphenol	57	< 57 U
621-64-7	N-Nitroso-Di-N-Propylamine	280	< 280 U
67-72-1	Hexachloroethane	57	< 57 U
98-95-3	Nitrobenzene	57	< 57 U
78-59-1	Isophorone	57	< 57 U
88-75-5	2-Nitrophenol	280	< 280 U
105-67-9	2,4-Dimethylphenol	57	< 57 U
65-85-0	Benzoic Acid	570	< 570 U
111-91-1	bis(2-Chloroethoxy) Methane	57	< 57 U
120-83-2	2,4-Dichlorophenol	280	< 280 U
120-82-1	1,2,4-Trichlorobenzene	57	< 57 U
91-20-3	Naphthalene	57	< 57 U
106-47-8	4-Chloroaniline	280	< 280 U
87-68-3	Hexachlorobutadiene	57	< 57 U
59-50-7	4-Chloro-3-methylphenol	280	< 280 U
91-57-6	2-Methylnaphthalene	57	< 57 U
77-47-4	Hexachlorocyclopentadiene	280	< 280 U
88-06-2	2,4,6-Trichlorophenol	280	< 280 U
95-95-4	2,4,5-Trichlorophenol	280	< 280 U
91-58-7	2-Chloronaphthalene	57	< 57 U
88-74-4	2-Nitroaniline	280	< 280 U
131-11-3	Dimethylphthalate	57	< 57 U
208-96-8	Acenaphthylene	57	< 57 U
99-09-2	3-Nitroaniline	280	< 280 U
83-32-9	Acenaphthene	57	< 57 U
51-28-5	2,4-Dinitrophenol	570	< 570 U
100-02-7	4-Nitrophenol	280	< 280 U
132-64-9	Dibenzofuran	57	< 57 U
606-20-2	2,6-Dinitrotoluene	280	< 280 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: G-M-2005
DILUTION

Lab Sample ID: IK93K
LIMS ID: 05-14188
Matrix: Sediment
Date Analyzed: 08/29/05 22:37

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	280	< 280 U
84-66-2	Diethylphthalate	57	< 57 U
7005-72-3	4-Chlorophenyl-phenylether	57	< 57 U
86-73-7	Fluorene	57	< 57 U
100-01-6	4-Nitroaniline	280	< 280 U
534-52-1	4,6-Dinitro-2-Methylphenol	570	< 570 U
86-30-6	N-Nitrosodiphenylamine	57	< 57 U
101-55-3	4-Bromophenyl-phenylether	57	< 57 U
118-74-1	Hexachlorobenzene	57	< 57 U
87-86-5	Pentachlorophenol	280	< 280 U
85-01-8	Phenanthrene	57	< 57 U
86-74-8	Carbazole	57	< 57 U
120-12-7	Anthracene	57	< 57 U
84-74-2	Di-n-Butylphthalate	57	< 57 U
206-44-0	Fluoranthene	57	< 57 U
129-00-0	Pyrene	57	< 57 U
85-68-7	Butylbenzylphthalate	57	< 57 U
91-94-1	3,3'-Dichlorobenzidine	280	< 280 U
56-55-3	Benzo(a)anthracene	57	< 57 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**57**	**64 B** U
218-01-9	Chrysene	57	< 57 U
117-84-0	Di-n-Octyl phthalate	57	< 57 U
205-99-2	Benzo(b)fluoranthene	57	< 57 U
207-08-9	Benzo(k)fluoranthene	57	< 57 U
50-32-8	Benzo(a)pyrene	57	< 57 U
193-39-5	Indeno(1,2,3-cd)pyrene	57	< 57 U
53-70-3	Dibenz(a,h)anthracene	57	< 57 U
191-24-2	Benzo(g,h,i)perylene	57	< 57 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	76.7%	2-Fluorobiphenyl	80.5%
d14-p-Terphenyl	75.5%	d4-1,2-Dichlorobenzene	73.0%
d5-Phenol	52.6%	2-Fluorophenol	60.2%
2,4,6-Tribromophenol	82.4%	d4-2-Chlorophenol	71.1%

EJB
9/12/05

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: HI-M-2005
SAMPLE

Lab Sample ID: IK93J
LIMS ID: 05-14187
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/30/05 23:32
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 19.0%
pH: 6.4

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	99	< 99 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	99	< 99 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	99	< 99 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	99	< 99 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	99	< 99 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	99	< 99 U
88-06-2	2,4,6-Trichlorophenol	99	< 99 U
95-95-4	2,4,5-Trichlorophenol	99	< 99 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	99	< 99 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	99	< 99 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	99	< 99 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	99	< 99 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: HI-M-2005
SAMPLE

Lab Sample ID: IK93J
LIMS ID: 05-14187
Matrix: Sediment
Date Analyzed: 08/30/05 23:32

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	99	< 99 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	99	< 99 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	99	< 99 U
85-01-8	Phenanthrene	20	< 20 U
86-74-8	Carbazole	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	**Fluoranthene**	**20**	**22**
129-00-0	**Pyrene**	**20**	**31**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	99	< 99 U
56-55-3	Benzo(a)anthracene	20	< 20 U
117-81-7	bis(2-Ethylhexyl)phthalate	20	< 20 U
218-01-9	Chrysene	20	< 20 U
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	Benzo(b)fluoranthene	20	< 20 U
207-08-9	Benzo(k)fluoranthene	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	65.6%	2-Fluorobiphenyl	64.4%
d14-p-Terphenyl	100%	d4-1,2-Dichlorobenzene	62.0%
d5-Phenol	59.5%	2-Fluorophenol	50.7%
2,4,6-Tribromophenol	92.8%	d4-2-Chlorophenol	64.5%

EJB
9/12/05

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: HI-M-2005
DILUTION

Lab Sample ID: IK93J
LIMS ID: 05-14187
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/29/05 22:04
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 3.00
Percent Moisture: 19.0%
pH: 6.4

CAS Number	Analyte	RL	Result
108-95-2	Phenol	59	< 59 U
111-44-4	Bis-(2-Chloroethyl) Ether	59	< 59 U
95-57-8	2-Chlorophenol	59	< 59 U
541-73-1	1,3-Dichlorobenzene	59	< 59 U
106-46-7	1,4-Dichlorobenzene	59	< 59 U
100-51-6	Benzyl Alcohol	59	< 59 U
95-50-1	1,2-Dichlorobenzene	59	< 59 U
95-48-7	2-Methylphenol	59	< 59 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	59	< 59 U
106-44-5	4-Methylphenol	59	< 59 U
621-64-7	N-Nitroso-Di-N-Propylamine	300	< 300 U
67-72-1	Hexachloroethane	59	< 59 U
98-95-3	Nitrobenzene	59	< 59 U
78-59-1	Isophorone	59	< 59 U
88-75-5	2-Nitrophenol	300	< 300 U
105-67-9	2,4-Dimethylphenol	59	< 59 U
65-85-0	Benzoic Acid	590	< 590 U
111-91-1	bis(2-Chloroethoxy) Methane	59	< 59 U
120-83-2	2,4-Dichlorophenol	300	< 300 U
120-82-1	1,2,4-Trichlorobenzene	59	< 59 U
91-20-3	Naphthalene	59	< 59 U
106-47-8	4-Chloroaniline	300	< 300 U
87-68-3	Hexachlorobutadiene	59	< 59 U
59-50-7	4-Chloro-3-methylphenol	300	< 300 U
91-57-6	2-Methylnaphthalene	59	< 59 U
77-47-4	Hexachlorocyclopentadiene	300	< 300 U
88-06-2	2,4,6-Trichlorophenol	300	< 300 U
95-95-4	2,4,5-Trichlorophenol	300	< 300 U
91-58-7	2-Chloronaphthalene	59	< 59 U
88-74-4	2-Nitroaniline	300	< 300 U
131-11-3	Dimethylphthalate	59	< 59 U
208-96-8	Acenaphthylene	59	< 59 U
99-09-2	3-Nitroaniline	300	< 300 U
83-32-9	Acenaphthene	59	< 59 U
51-28-5	2,4-Dinitrophenol	590	< 590 U
100-02-7	4-Nitrophenol	300	< 300 U
132-64-9	Dibenzofuran	59	< 59 U
606-20-2	2,6-Dinitrotoluene	300	< 300 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: HI-M-2005
DILUTION

Lab Sample ID: IK93J
LIMS ID: 05-14187
Matrix: Sediment
Date Analyzed: 08/29/05 22:04

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	300	< 300 U
84-66-2	Diethylphthalate	59	< 59 U
7005-72-3	4-Chlorophenyl-phenylether	59	< 59 U
86-73-7	Fluorene	59	< 59 U
100-01-6	4-Nitroaniline	300	< 300 U
534-52-1	4,6-Dinitro-2-Methylphenol	590	< 590 U
86-30-6	N-Nitrosodiphenylamine	59	< 59 U
101-55-3	4-Bromophenyl-phenylether	59	< 59 U
118-74-1	Hexachlorobenzene	59	< 59 U
87-86-5	Pentachlorophenol	300	< 300 U
85-01-8	Phenanthrene	59	< 59 U
86-74-8	Carbazole	59	< 59 U
120-12-7	Anthracene	59	< 59 U
84-74-2	Di-n-Butylphthalate	59	< 59 U
206-44-0	Fluoranthene	59	< 59 U
129-00-0	Pyrene	59	< 59 U
85-68-7	Butylbenzylphthalate	59	< 59 U
91-94-1	3,3'-Dichlorobenzidine	300	< 300 U
56-55-3	Benzo(a)anthracene	59	< 59 U
117-81-7	bis(2-Ethylhexyl)phthalate	59	< 59 U
218-01-9	Chrysene	59	< 59 U
117-84-0	Di-n-Octyl phthalate	59	< 59 U
205-99-2	Benzo(b)fluoranthene	59	< 59 U
207-08-9	Benzo(k)fluoranthene	59	< 59 U
50-32-8	Benzo(a)pyrene	59	< 59 U
193-39-5	Indeno(1,2,3-cd)pyrene	59	< 59 U
53-70-3	Dibenz(a,h)anthracene	59	< 59 U
191-24-2	Benzo(g,h,i)perylene	59	< 59 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	63.4%	2-Fluorobiphenyl	67.1%
d14-p-Terphenyl	63.5%	d4-1,2-Dichlorobenzene	62.4%
d5-Phenol	42.4%	2-Fluorophenol	47.4%
2,4,6-Tribromophenol	67.5%	d4-2-Chlorophenol	57.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: J-M-2005
SAMPLE

Lab Sample ID: IK93I
LIMS ID: 05-14186
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/30/05 22:59
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 18.0%
pH: 6.5

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	97	< 97 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: J-M-2005
SAMPLE

Lab Sample ID: IK93I
LIMS ID: 05-14186
Matrix: Sediment
Date Analyzed: 08/30/05 22:59

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	< 19 U
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	Phenanthrene	19	< 19 U
86-74-8	Carbazole	19	< 19 U
120-12-7	Anthracene	19	< 19 U
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	Fluoranthene	19	< 19 U
129-00-0	**Pyrene**	**19**	**19**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	Benzo(a)anthracene	19	< 19 U
117-81-7	bis(2-Ethylhexyl)phthalate	19	< 19 U
218-01-9	Chrysene	19	< 19 U
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	Benzo(b)fluoranthene	19	< 19 U J
207-08-9	Benzo(k)fluoranthene	19	< 19 U J
50-32-8	Benzo(a)pyrene	19	< 19 U J
193-39-5	Indeno(1,2,3-cd)pyrene	19	< 19 U
53-70-3	Dibenz(a,h)anthracene	19	< 19 U J
191-24-2	Benzo(g,h,i)perylene	19	< 19 U J

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	70.8%	2-Fluorobiphenyl	67.6%
d14-p-Terphenyl	108%	d4-1,2-Dichlorobenzene	64.4%
d5-Phenol	64.0%	2-Fluorophenol	62.9%
2,4,6-Tribromophenol	101%	d4-2-Chlorophenol	70.7%

EJB
9/12/05

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: J-M-2005
DILUTION

Lab Sample ID: IK93I
LIMS ID: 05-14186
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/29/05 21:32
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 3.00
Percent Moisture: 18.0%
pH: 6.5

CAS Number	Analyte	RL	Result
108-95-2	Phenol	58	< 58 U
111-44-4	Bis-(2-Chloroethyl) Ether	58	< 58 U
95-57-8	2-Chlorophenol	58	< 58 U
541-73-1	1,3-Dichlorobenzene	58	< 58 U
106-46-7	1,4-Dichlorobenzene	58	< 58 U
100-51-6	Benzyl Alcohol	58	< 58 U
95-50-1	1,2-Dichlorobenzene	58	< 58 U
95-48-7	2-Methylphenol	58	< 58 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	58	< 58 U
106-44-5	4-Methylphenol	58	< 58 U
621-64-7	N-Nitroso-Di-N-Propylamine	290	< 290 U
67-72-1	Hexachloroethane	58	< 58 U
98-95-3	Nitrobenzene	58	< 58 U
78-59-1	Isophorone	58	< 58 U
88-75-5	2-Nitrophenol	290	< 290 U
105-67-9	2,4-Dimethylphenol	58	< 58 U
65-85-0	Benzoic Acid	580	< 580 U
111-91-1	bis(2-Chloroethoxy) Methane	58	< 58 U
120-83-2	2,4-Dichlorophenol	290	< 290 U
120-82-1	1,2,4-Trichlorobenzene	58	< 58 U
91-20-3	Naphthalene	58	< 58 U
106-47-8	4-Chloroaniline	290	< 290 U
87-68-3	Hexachlorobutadiene	58	< 58 U
59-50-7	4-Chloro-3-methylphenol	290	< 290 U
91-57-6	2-Methylnaphthalene	58	< 58 U
77-47-4	Hexachlorocyclopentadiene	290	< 290 U
88-06-2	2,4,6-Trichlorophenol	290	< 290 U
95-95-4	2,4,5-Trichlorophenol	290	< 290 U
91-58-7	2-Chloronaphthalene	58	< 58 U
88-74-4	2-Nitroaniline	290	< 290 U
131-11-3	Dimethylphthalate	58	< 58 U
208-96-8	Acenaphthylene	58	< 58 U
99-09-2	3-Nitroaniline	290	< 290 U
83-32-9	Acenaphthene	58	< 58 U
51-28-5	2,4-Dinitrophenol	580	< 580 U
100-02-7	4-Nitrophenol	290	< 290 U
132-64-9	Dibenzofuran	58	< 58 U
606-20-2	2,6-Dinitrotoluene	290	< 290 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: J-M-2005
DILUTION

Lab Sample ID: IK93I
LIMS ID: 05-14186
Matrix: Sediment
Date Analyzed: 08/29/05 21:32

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	290	< 290 U
84-66-2	Diethylphthalate	58	< 58 U
7005-72-3	4-Chlorophenyl-phenylether	58	< 58 U
86-73-7	Fluorene	58	< 58 U
100-01-6	4-Nitroaniline	290	< 290 U
534-52-1	4,6-Dinitro-2-Methylphenol	580	< 580 U
86-30-6	N-Nitrosodiphenylamine	58	< 58 U
101-55-3	4-Bromophenyl-phenylether	58	< 58 U
118-74-1	Hexachlorobenzene	58	< 58 U
87-86-5	Pentachlorophenol	290	< 290 U
85-01-8	Phenanthrene	58	< 58 U
86-74-8	Carbazole	58	< 58 U
120-12-7	Anthracene	58	< 58 U
84-74-2	Di-n-Butylphthalate	58	< 58 U
206-44-0	Fluoranthene	58	< 58 U
129-00-0	Pyrene	58	< 58 U
85-68-7	Butylbenzylphthalate	58	< 58 U
91-94-1	3,3'-Dichlorobenzidine	290	< 290 U
56-55-3	Benzo(a)anthracene	58	< 58 U
117-81-7	bis(2-Ethylhexyl)phthalate	58	< 58 U
218-01-9	Chrysene	58	< 58 U
117-84-0	Di-n-Octyl phthalate	58	< 58 U
205-99-2	Benzo(b)fluoranthene	58	< 58 U
207-08-9	Benzo(k)fluoranthene	58	< 58 U
50-32-8	Benzo(a)pyrene	58	< 58 U
193-39-5	Indeno(1,2,3-cd)pyrene	58	< 58 U
53-70-3	Dibenz(a,h)anthracene	58	< 58 U
191-24-2	Benzo(g,h,i)perylene	58	< 58 U

Reported in μg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	70.3%	2-Fluorobiphenyl	74.5%
d14-p-Terphenyl	67.1%	d4-1,2-Dichlorobenzene	64.8%
d5-Phenol	49.3%	2-Fluorophenol	56.4%
2,4,6-Tribromophenol	77.7%	d4-2-Chlorophenol	65.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: K-M-2005
SAMPLE

Lab Sample ID: IK93N
LIMS ID: 05-14191
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/31/05 01:09
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 15.8%
pH: 6.6

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	98	< 98 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: K-M-2005
SAMPLE

Lab Sample ID: IK93N
LIMS ID: 05-14191
Matrix: Sediment
Date Analyzed: 08/31/05 01:09

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	Phenanthrene	20	< 20 U
86-74-8	Carbazole	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	**Di-n-Butylphthalate**	**20**	**41** U
206-44-0	Fluoranthene	20	< 20 U
129-00-0	**Pyrene**	**20**	**30**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	Benzo(a)anthracene	20	< 20 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**36 B** U
218-01-9	Chrysene	20	< 20 U
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	Benzo(b)fluoranthene	20	< 20 U
207-08-9	Benzo(k)fluoranthene	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	68.8%	2-Fluorobiphenyl	65.2%
d14-p-Terphenyl	115%	d4-1,2-Dichlorobenzene	64.8%
d5-Phenol	60.5%	2-Fluorophenol	61.3%
2,4,6-Tribromophenol	91.5%	d4-2-Chlorophenol	68.3%

EJB
9/12/05

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: K-M-2005
DILUTION

Lab Sample ID: IK93N
LIMS ID: 05-14191
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/30/05 00:15
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 3.00
Percent Moisture: 15.8%
pH: 6.6

CAS Number	Analyte	RL	Result
108-95-2	Phenol	59	< 59 U
111-44-4	Bis-(2-Chloroethyl) Ether	59	< 59 U
95-57-8	2-Chlorophenol	59	< 59 U
541-73-1	1,3-Dichlorobenzene	59	< 59 U
106-46-7	1,4-Dichlorobenzene	59	< 59 U
100-51-6	Benzyl Alcohol	59	< 59 U
95-50-1	1,2-Dichlorobenzene	59	< 59 U
95-48-7	2-Methylphenol	59	< 59 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	59	< 59 U
106-44-5	4-Methylphenol	59	< 59 U
621-64-7	N-Nitroso-Di-N-Propylamine	300	< 300 U
67-72-1	Hexachloroethane	59	< 59 U
98-95-3	Nitrobenzene	59	< 59 U
78-59-1	Isophorone	59	< 59 U
88-75-5	2-Nitrophenol	300	< 300 U
105-67-9	2,4-Dimethylphenol	59	< 59 U
65-85-0	Benzoic Acid	590	< 590 U
111-91-1	bis(2-Chloroethoxy) Methane	59	< 59 U
120-83-2	2,4-Dichlorophenol	300	< 300 U
120-82-1	1,2,4-Trichlorobenzene	59	< 59 U
91-20-3	Naphthalene	59	< 59 U
106-47-8	4-Chloroaniline	300	< 300 U
87-68-3	Hexachlorobutadiene	59	< 59 U
59-50-7	4-Chloro-3-methylphenol	300	< 300 U
91-57-6	2-Methylnaphthalene	59	< 59 U
77-47-4	Hexachlorocyclopentadiene	300	< 300 U
88-06-2	2,4,6-Trichlorophenol	300	< 300 U
95-95-4	2,4,5-Trichlorophenol	300	< 300 U
91-58-7	2-Chloronaphthalene	59	< 59 U
88-74-4	2-Nitroaniline	300	< 300 U
131-11-3	Dimethylphthalate	59	< 59 U
208-96-8	Acenaphthylene	59	< 59 U
99-09-2	3-Nitroaniline	300	< 300 U
83-32-9	Acenaphthene	59	< 59 U
51-28-5	2,4-Dinitrophenol	590	< 590 U
100-02-7	4-Nitrophenol	300	< 300 U
132-64-9	Dibenzofuran	59	< 59 U
606-20-2	2,6-Dinitrotoluene	300	< 300 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: K-M-2005
DILUTION

Lab Sample ID: IK93N
LIMS ID: 05-14191
Matrix: Sediment
Date Analyzed: 08/30/05 00:15

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	300	< 300 U
84-66-2	Diethylphthalate	59	< 59 U
7005-72-3	4-Chlorophenyl-phenylether	59	< 59 U
86-73-7	Fluorene	59	< 59 U
100-01-6	4-Nitroaniline	300	< 300 U
534-52-1	4,6-Dinitro-2-Methylphenol	590	< 590 U
86-30-6	N-Nitrosodiphenylamine	59	< 59 U
101-55-3	4-Bromophenyl-phenylether	59	< 59 U
118-74-1	Hexachlorobenzene	59	< 59 U
87-86-5	Pentachlorophenol	300	< 300 U
85-01-8	Phenanthrene	59	< 59 U
86-74-8	Carbazole	59	< 59 U
120-12-7	Anthracene	59	< 59 U
84-74-2	Di-n-Butylphthalate	59	< 59 U
206-44-0	Fluoranthene	59	< 59 U
129-00-0	Pyrene	59	< 59 U
85-68-7	Butylbenzylphthalate	59	< 59 U
91-94-1	3,3'-Dichlorobenzidine	300	< 300 U
56-55-3	Benzo(a)anthracene	59	< 59 U
117-81-7	bis(2-Ethylhexyl)phthalate	59	< 59 U
218-01-9	Chrysene	59	< 59 U
117-84-0	Di-n-Octyl phthalate	59	< 59 U
205-99-2	Benzo(b)fluoranthene	59	< 59 U
207-08-9	Benzo(k)fluoranthene	59	< 59 U
50-32-8	Benzo(a)pyrene	59	< 59 U
193-39-5	Indeno(1,2,3-cd)pyrene	59	< 59 U
53-70-3	Dibenz(a,h)anthracene	59	< 59 U
191-24-2	Benzo(g,h,i)perylene	59	< 59 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.9%	2-Fluorobiphenyl	58.2%
d14-p-Terphenyl	66.8%	d4-1,2-Dichlorobenzene	62.4%
d5-Phenol	41.5%	2-Fluorophenol	49.2%
2,4,6-Tribromophenol	64.7%	d4-2-Chlorophenol	56.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: L-M-2005
SAMPLE

Lab Sample ID: IK93H
LIMS ID: 05-14185
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/30/05 22:26
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 18.0%
pH: 6.5

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	97	< 97 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: L-M-2005
SAMPLE

Lab Sample ID: IK93H
LIMS ID: 05-14185
Matrix: Sediment
Date Analyzed: 08/30/05 22:26

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	**Diethylphthalate**	**19**	**30**
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	< 19 U
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	Phenanthrene	19	< 19 U
86-74-8	Carbazole	19	< 19 U
120-12-7	Anthracene	19	< 19 U
84-74-2	**Di-n-Butylphthalate**	**19**	**62** U
206-44-0	**Fluoranthene**	**19**	**22**
129-00-0	**Pyrene**	**19**	**32**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	Benzo(a)anthracene	19	< 19 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**22 B** U
218-01-9	Chrysene	19	< 19 U
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	Benzo(b)fluoranthene	19	< 19 U J
207-08-9	Benzo(k)fluoranthene	19	< 19 U J
50-32-8	Benzo(a)pyrene	19	< 19 U J
193-39-5	Indeno(1,2,3-cd)pyrene	19	< 19 U
53-70-3	Dibenz(a,h)anthracene	19	< 19 U J
191-24-2	Benzo(g,h,i)perylene	19	< 19 U J

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.8%	2-Fluorobiphenyl	60.4%
d14-p-Terphenyl	92.0%	d4-1,2-Dichlorobenzene	58.8%
d5-Phenol	56.3%	2-Fluorophenol	50.9%
2,4,6-Tribromophenol	90.4%	d4-2-Chlorophenol	61.6%

EJB
9/12/05

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: L-M-2005
DILUTION

Lab Sample ID: IK93H
LIMS ID: 05-14185
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/29/05 20:59
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 3.00
Percent Moisture: 18.0%
pH: 6.5

CAS Number	Analyte	RL	Result
108-95-2	Phenol	58	< 58 U
111-44-4	Bis-(2-Chloroethyl) Ether	58	< 58 U
95-57-8	2-Chlorophenol	58	< 58 U
541-73-1	1,3-Dichlorobenzene	58	< 58 U
106-46-7	1,4-Dichlorobenzene	58	< 58 U
100-51-6	Benzyl Alcohol	58	< 58 U
95-50-1	1,2-Dichlorobenzene	58	< 58 U
95-48-7	2-Methylphenol	58	< 58 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	58	< 58 U
106-44-5	4-Methylphenol	58	< 58 U
621-64-7	N-Nitroso-Di-N-Propylamine	290	< 290 U
67-72-1	Hexachloroethane	58	< 58 U
98-95-3	Nitrobenzene	58	< 58 U
78-59-1	Isophorone	58	< 58 U
88-75-5	2-Nitrophenol	290	< 290 U
105-67-9	2,4-Dimethylphenol	58	< 58 U
65-85-0	Benzoic Acid	580	< 580 U
111-91-1	bis(2-Chloroethoxy) Methane	58	< 58 U
120-83-2	2,4-Dichlorophenol	290	< 290 U
120-82-1	1,2,4-Trichlorobenzene	58	< 58 U
91-20-3	Naphthalene	58	< 58 U
106-47-8	4-Chloroaniline	290	< 290 U
87-68-3	Hexachlorobutadiene	58	< 58 U
59-50-7	4-Chloro-3-methylphenol	290	< 290 U
91-57-6	2-Methylnaphthalene	58	< 58 U
77-47-4	Hexachlorocyclopentadiene	290	< 290 U
88-06-2	2,4,6-Trichlorophenol	290	< 290 U
95-95-4	2,4,5-Trichlorophenol	290	< 290 U
91-58-7	2-Chloronaphthalene	58	< 58 U
88-74-4	2-Nitroaniline	290	< 290 U
131-11-3	Dimethylphthalate	58	< 58 U
208-96-8	Acenaphthylene	58	< 58 U
99-09-2	3-Nitroaniline	290	< 290 U
83-32-9	Acenaphthene	58	< 58 U
51-28-5	2,4-Dinitrophenol	580	< 580 U
100-02-7	4-Nitrophenol	290	< 290 U
132-64-9	Dibenzofuran	58	< 58 U
606-20-2	2,6-Dinitrotoluene	290	< 290 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: L-M-2005
DILUTION

Lab Sample ID: IK93H
LIMS ID: 05-14185
Matrix: Sediment
Date Analyzed: 08/29/05 20:59

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	290	< 290 U
84-66-2	Diethylphthalate	58	< 58 U
7005-72-3	4-Chlorophenyl-phenylether	58	< 58 U
86-73-7	Fluorene	58	< 58 U
100-01-6	4-Nitroaniline	290	< 290 U
534-52-1	4,6-Dinitro-2-Methylphenol	580	< 580 U
86-30-6	N-Nitrosodiphenylamine	58	< 58 U
101-55-3	4-Bromophenyl-phenylether	58	< 58 U
118-74-1	Hexachlorobenzene	58	< 58 U
87-86-5	Pentachlorophenol	290	< 290 U
85-01-8	Phenanthrene	58	< 58 U
86-74-8	Carbazole	58	< 58 U
120-12-7	Anthracene	58	< 58 U
84-74-2	**Di-n-Butylphthalate**	**58**	**73** U
206-44-0	Fluoranthene	58	< 58 U
129-00-0	Pyrene	58	< 58 U
85-68-7	Butylbenzylphthalate	58	< 58 U
91-94-1	3,3'-Dichlorobenzidine	290	< 290 U
56-55-3	Benzo(a)anthracene	58	< 58 U
117-81-7	bis(2-Ethylhexyl)phthalate	58	< 58 U
218-01-9	Chrysene	58	< 58 U
117-84-0	Di-n-Octyl phthalate	58	< 58 U
205-99-2	Benzo(b)fluoranthene	58	< 58 U
207-08-9	Benzo(k)fluoranthene	58	< 58 U
50-32-8	Benzo(a)pyrene	58	< 58 U
193-39-5	Indeno(1,2,3-cd)pyrene	58	< 58 U
53-70-3	Dibenz(a,h)anthracene	58	< 58 U
191-24-2	Benzo(g,h,i)perylene	58	< 58 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	61.4%	2-Fluorobiphenyl	64.7%
d14-p-Terphenyl	59.6%	d4-1,2-Dichlorobenzene	61.6%
d5-Phenol	37.2%	2-Fluorophenol	46.2%
2,4,6-Tribromophenol	68.2%	d4-2-Chlorophenol	55.4%

EJB
9/12/05

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: M-M-2005
SAMPLE

Lab Sample ID: IK93F
LIMS ID: 05-14183
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/30/05 21:20
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 25.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 16.1%
pH: 6.3

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	99	< 99 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	99	< 99 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	99	< 99 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	99	< 99 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	99	< 99 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	99	< 99 U
88-06-2	2,4,6-Trichlorophenol	99	< 99 U
95-95-4	2,4,5-Trichlorophenol	99	< 99 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	99	< 99 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	99	< 99 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	99	< 99 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	99	< 99 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: M-M-2005
SAMPLE

Lab Sample ID: IK93F
LIMS ID: 05-14183
Matrix: Sediment
Date Analyzed: 08/30/05 21:20

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	99	< 99 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	99	< 99 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	99	< 99 U
85-01-8	Phenanthrene	20	< 20 U
86-74-8	Carbazole	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	Fluoranthene	20	< 20 U
129-00-0	**Pyrene**	**20**	**23**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	99	< 99 U
56-55-3	Benzo(a)anthracene	20	< 20 U
117-81-7	bis(2-Ethylhexyl)phthalate	20	< 20 U
218-01-9	Chrysene	20	< 20 U
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	Benzo(b)fluoranthene	20	< 20 U
207-08-9	Benzo(k)fluoranthene	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	20	< 20 U

Reported in μg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.8%	2-Fluorobiphenyl	58.8%
d14-p-Terphenyl	80.0%	d4-1,2-Dichlorobenzene	57.2%
d5-Phenol	53.9%	2-Fluorophenol	46.1%
2,4,6-Tribromophenol	84.3%	d4-2-Chlorophenol	60.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: M-M-2005
DILUTION

Lab Sample ID: IK93F
LIMS ID: 05-14183
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/29/05 19:54
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 25.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 3.00
Percent Moisture: 16.1%
pH: 6.3

CAS Number	Analyte	RL	Result
108-95-2	Phenol	59	< 59 U
111-44-4	Bis-(2-Chloroethyl) Ether	59	< 59 U
95-57-8	2-Chlorophenol	59	< 59 U
541-73-1	1,3-Dichlorobenzene	59	< 59 U
106-46-7	1,4-Dichlorobenzene	59	< 59 U
100-51-6	Benzyl Alcohol	59	< 59 U
95-50-1	1,2-Dichlorobenzene	59	< 59 U
95-48-7	2-Methylphenol	59	< 59 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	59	< 59 U
106-44-5	4-Methylphenol	59	< 59 U
621-64-7	N-Nitroso-Di-N-Propylamine	300	< 300 U
67-72-1	Hexachloroethane	59	< 59 U
98-95-3	Nitrobenzene	59	< 59 U
78-59-1	Isophorone	59	< 59 U
88-75-5	2-Nitrophenol	300	< 300 U
105-67-9	2,4-Dimethylphenol	59	< 59 U
65-85-0	Benzoic Acid	590	< 590 U
111-91-1	bis(2-Chloroethoxy) Methane	59	< 59 U
120-83-2	2,4-Dichlorophenol	300	< 300 U
120-82-1	1,2,4-Trichlorobenzene	59	< 59 U
91-20-3	Naphthalene	59	< 59 U
106-47-8	4-Chloroaniline	300	< 300 U
87-68-3	Hexachlorobutadiene	59	< 59 U
59-50-7	4-Chloro-3-methylphenol	300	< 300 U
91-57-6	2-Methylnaphthalene	59	< 59 U
77-47-4	Hexachlorocyclopentadiene	300	< 300 U
88-06-2	2,4,6-Trichlorophenol	300	< 300 U
95-95-4	2,4,5-Trichlorophenol	300	< 300 U
91-58-7	2-Chloronaphthalene	59	< 59 U
88-74-4	2-Nitroaniline	300	< 300 U
131-11-3	Dimethylphthalate	59	< 59 U
208-96-8	Acenaphthylene	59	< 59 U
99-09-2	3-Nitroaniline	300	< 300 U
83-32-9	Acenaphthene	59	< 59 U
51-28-5	2,4-Dinitrophenol	590	< 590 U
100-02-7	4-Nitrophenol	300	< 300 U
132-64-9	Dibenzofuran	59	< 59 U
606-20-2	2,6-Dinitrotoluene	300	< 300 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: M-M-2005
DILUTION

Lab Sample ID: IK93F
LIMS ID: 05-14183
Matrix: Sediment
Date Analyzed: 08/29/05 19:54

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	300	< 300 U
84-66-2	Diethylphthalate	59	< 59 U
7005-72-3	4-Chlorophenyl-phenylether	59	< 59 U
86-73-7	Fluorene	59	< 59 U
100-01-6	4-Nitroaniline	300	< 300 U
534-52-1	4,6-Dinitro-2-Methylphenol	590	< 590 U
86-30-6	N-Nitrosodiphenylamine	59	< 59 U
101-55-3	4-Bromophenyl-phenylether	59	< 59 U
118-74-1	Hexachlorobenzene	59	< 59 U
87-86-5	Pentachlorophenol	300	< 300 U
85-01-8	Phenanthrene	59	< 59 U
86-74-8	Carbazole	59	< 59 U
120-12-7	Anthracene	59	< 59 U
84-74-2	Di-n-Butylphthalate	59	< 59 U
206-44-0	Fluoranthene	59	< 59 U
129-00-0	Pyrene	59	< 59 U
85-68-7	Butylbenzylphthalate	59	< 59 U
91-94-1	3,3'-Dichlorobenzidine	300	< 300 U
56-55-3	Benzo(a)anthracene	59	< 59 U
117-81-7	bis(2-Ethylhexyl)phthalate	59	< 59 U
218-01-9	Chrysene	59	< 59 U
117-84-0	Di-n-Octyl phthalate	59	< 59 U
205-99-2	Benzo(b)fluoranthene	59	< 59 U
207-08-9	Benzo(k)fluoranthene	59	< 59 U
50-32-8	Benzo(a)pyrene	59	< 59 U
193-39-5	Indeno(1,2,3-cd)pyrene	59	< 59 U
53-70-3	Dibenz(a,h)anthracene	59	< 59 U
191-24-2	Benzo(g,h,i)perylene	59	< 59 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.4%	2-Fluorobiphenyl	64.8%
d14-p-Terphenyl	56.3%	d4-1,2-Dichlorobenzene	60.5%
d5-Phenol	41.7%	2-Fluorophenol	48.6%
2,4,6-Tribromophenol	64.8%	d4-2-Chlorophenol	56.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: MD-M-2005
SAMPLE

Lab Sample ID: IK93G
LIMS ID: 05-14184
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/30/05 21:53
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 18.2%
pH: 6.3

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	98	< 98 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: MD-M-2005
SAMPLE

Lab Sample ID: IK93G
LIMS ID: 05-14184
Matrix: Sediment
Date Analyzed: 08/30/05 21:53

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	Phenanthrene	20	< 20 U
86-74-8	Carbazole	20	< 20 U
120-12-7	**Anthracene**	**20**	**37**
84-74-2	**Di-n-Butylphthalate**	**20**	**30** U
206-44-0	**Fluoranthene**	**20**	**88**
129-00-0	**Pyrene**	**20**	**110**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	**Benzo(a)anthracene**	**20**	**340**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**20 B** U
218-01-9	**Chrysene**	**20**	**680**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**500** J
207-08-9	**Benzo(k)fluoranthene**	**20**	**390** J
50-32-8	**Benzo(a)pyrene**	**20**	**310** J
193-39-5	**Indeno(1,2,3-cd)pyrene**	**20**	**89**
53-70-3	**Dibenz(a,h)anthracene**	**20**	**22** J
191-24-2	**Benzo(g,h,i)perylene**	**20**	**75** J

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	69.2%	2-Fluorobiphenyl	66.0%
d14-p-Terphenyl	101%	d4-1,2-Dichlorobenzene	62.4%
d5-Phenol	62.1%	2-Fluorophenol	55.5%
2,4,6-Tribromophenol	102%	d4-2-Chlorophenol	67.7%

EJB
9/12/05

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: MD-M-2005
DILUTION

Lab Sample ID: IK93G
LIMS ID: 05-14184
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/29/05 20:26
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 3.00
Percent Moisture: 18.2%
pH: 6.3

CAS Number	Analyte	RL	Result
108-95-2	Phenol	59	< 59 U
111-44-4	Bis-(2-Chloroethyl) Ether	59	< 59 U
95-57-8	2-Chlorophenol	59	< 59 U
541-73-1	1,3-Dichlorobenzene	59	< 59 U
106-46-7	1,4-Dichlorobenzene	59	< 59 U
100-51-6	Benzyl Alcohol	59	< 59 U
95-50-1	1,2-Dichlorobenzene	59	< 59 U
95-48-7	2-Methylphenol	59	< 59 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	59	< 59 U
106-44-5	4-Methylphenol	59	< 59 U
621-64-7	N-Nitroso-Di-N-Propylamine	290	< 290 U
67-72-1	Hexachloroethane	59	< 59 U
98-95-3	Nitrobenzene	59	< 59 U
78-59-1	Isophorone	59	< 59 U
88-75-5	2-Nitrophenol	290	< 290 U
105-67-9	2,4-Dimethylphenol	59	< 59 U
65-85-0	Benzoic Acid	590	< 590 U
111-91-1	bis(2-Chloroethoxy) Methane	59	< 59 U
120-83-2	2,4-Dichlorophenol	290	< 290 U
120-82-1	1,2,4-Trichlorobenzene	59	< 59 U
91-20-3	Naphthalene	59	< 59 U
106-47-8	4-Chloroaniline	290	< 290 U
87-68-3	Hexachlorobutadiene	59	< 59 U
59-50-7	4-Chloro-3-methylphenol	290	< 290 U
91-57-6	2-Methylnaphthalene	59	< 59 U
77-47-4	Hexachlorocyclopentadiene	290	< 290 U
88-06-2	2,4,6-Trichlorophenol	290	< 290 U
95-95-4	2,4,5-Trichlorophenol	290	< 290 U
91-58-7	2-Chloronaphthalene	59	< 59 U
88-74-4	2-Nitroaniline	290	< 290 U
131-11-3	Dimethylphthalate	59	< 59 U
208-96-8	Acenaphthylene	59	< 59 U
99-09-2	3-Nitroaniline	290	< 290 U
83-32-9	Acenaphthene	59	< 59 U
51-28-5	2,4-Dinitrophenol	590	< 590 U
100-02-7	4-Nitrophenol	290	< 290 U
132-64-9	Dibenzofuran	59	< 59 U
606-20-2	2,6-Dinitrotoluene	290	< 290 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: MD-M-2005
DILUTION

Lab Sample ID: IK93G
LIMS ID: 05-14184
Matrix: Sediment
Date Analyzed: 08/29/05 20:26

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	290	< 290 U
84-66-2	Diethylphthalate	59	< 59 U
7005-72-3	4-Chlorophenyl-phenylether	59	< 59 U
86-73-7	Fluorene	59	< 59 U
100-01-6	4-Nitroaniline	290	< 290 U
534-52-1	4,6-Dinitro-2-Methylphenol	590	< 590 U
86-30-6	N-Nitrosodiphenylamine	59	< 59 U
101-55-3	4-Bromophenyl-phenylether	59	< 59 U
118-74-1	Hexachlorobenzene	59	< 59 U
87-86-5	Pentachlorophenol	290	< 290 U
85-01-8	Phenanthrene	59	< 59 U
86-74-8	Carbazole	59	< 59 U
120-12-7	Anthracene	59	< 59 U
84-74-2	Di-n-Butylphthalate	59	< 59 U
206-44-0	**Fluoranthene**	**59**	**90**
129-00-0	**Pyrene**	**59**	**72**
85-68-7	Butylbenzylphthalate	59	< 59 U
91-94-1	3,3'-Dichlorobenzidine	290	< 290 U
56-55-3	**Benzo(a)anthracene**	**59**	**360**
117-81-7	bis(2-Ethylhexyl)phthalate	59	< 59 U
218-01-9	**Chrysene**	**59**	**740**
117-84-0	Di-n-Octyl phthalate	59	< 59 U
205-99-2	**Benzo(b)fluoranthene**	**59**	**450**
207-08-9	**Benzo(k)fluoranthene**	**59**	**300**
50-32-8	**Benzo(a)pyrene**	**59**	**330**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**59**	**84**
53-70-3	Dibenz(a,h)anthracene	59	< 59 U
191-24-2	**Benzo(g,h,i)perylene**	**59**	**63**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	68.5%	2-Fluorobiphenyl	72.0%
d14-p-Terphenyl	64.8%	d4-1,2-Dichlorobenzene	65.4%
d5-Phenol	48.1%	2-Fluorophenol	51.1%
2,4,6-Tribromophenol	71.8%	d4-2-Chlorophenol	61.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: N-M-2005
SAMPLE

Lab Sample ID: IK93M
LIMS ID: 05-14190
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/29/05 23:42
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 19.2%
pH: 6.8

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	< 98 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	< 98 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	< 98 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	98	< 98 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: N-M-2005
SAMPLE

Lab Sample ID: IK93M
LIMS ID: 05-14190
Matrix: Sediment
Date Analyzed: 08/29/05 23:42

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	98	< 98 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	< 98 U
85-01-8	Phenanthrene	20	< 20 U
86-74-8	Carbazole	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	**Di-n-Butylphthalate**	**20**	**59** U
206-44-0	**Fluoranthene**	**20**	**44**
129-00-0	**Pyrene**	**20**	**38**
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	Benzo(a)anthracene	20	< 20 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**20 B** U
218-01-9	**Chrysene**	**20**	**21**
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	**Benzo(b)fluoranthene**	**20**	**21**
207-08-9	Benzo(k)fluoranthene	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	70.0%	2-Fluorobiphenyl	70.4%
d14-p-Terphenyl	64.4%	d4-1,2-Dichlorobenzene	65.6%
d5-Phenol	54.9%	2-Fluorophenol	41.1%
2,4,6-Tribromophenol	83.5%	d4-2-Chlorophenol	63.7%

EJB
9/12/05

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: O-M-2005
SAMPLE

Lab Sample ID: IK93E
LIMS ID: 05-14182
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/29/05 18:16
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 16.2%
pH: 7.0

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	97	< 97 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: O-M-2005
SAMPLE

Lab Sample ID: IK93E
LIMS ID: 05-14182
Matrix: Sediment
Date Analyzed: 08/29/05 18:16

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	< 19 U
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	Phenanthrene	19	< 19 U
86-74-8	Carbazole	19	< 19 U
120-12-7	Anthracene	19	< 19 U
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	Fluoranthene	19	< 19 U
129-00-0	Pyrene	19	< 19 U
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	Benzo(a)anthracene	19	< 19 U
117-81-7	bis(2-Ethylhexyl)phthalate	19	< 19 U
218-01-9	Chrysene	19	< 19 U
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	Benzo(b)fluoranthene	19	< 19 U
207-08-9	Benzo(k)fluoranthene	19	< 19 U
50-32-8	Benzo(a)pyrene	19	< 19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19	< 19 U
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	Benzo(g,h,i)perylene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	61.2%	2-Fluorobiphenyl	66.0%
d14-p-Terphenyl	56.4%	d4-1,2-Dichlorobenzene	57.2%
d5-Phenol	48.3%	2-Fluorophenol	39.5%
2,4,6-Tribromophenol	72.5%	d4-2-Chlorophenol	56.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: P-M-2005
SAMPLE

Lab Sample ID: IK93D
LIMS ID: 05-14181
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/29/05 17:43
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 26.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 17.4%
pH: 7.1

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	95	< 95 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	95	< 95 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	95	< 95 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	95	< 95 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	95	< 95 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	95	< 95 U
88-06-2	2,4,6-Trichlorophenol	95	< 95 U
95-95-4	2,4,5-Trichlorophenol	95	< 95 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	95	< 95 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	95	< 95 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	95	< 95 U
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	95	< 95 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: P-M-2005
SAMPLE

Lab Sample ID: IK93D
LIMS ID: 05-14181
Matrix: Sediment
Date Analyzed: 08/29/05 17:43

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	95	< 95 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	< 19 U
100-01-6	4-Nitroaniline	95	< 95 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	95	< 95 U
85-01-8	Phenanthrene	19	< 19 U
86-74-8	Carbazole	19	< 19 U
120-12-7	Anthracene	19	< 19 U
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**33**
129-00-0	**Pyrene**	**19**	**28**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	95	< 95 U
56-55-3	Benzo(a)anthracene	19	< 19 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**22 B** U
218-01-9	**Chrysene**	**19**	**21**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	Benzo(b)fluoranthene	19	< 19 U
207-08-9	Benzo(k)fluoranthene	19	< 19 U
50-32-8	Benzo(a)pyrene	19	< 19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19	< 19 U
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	Benzo(g,h,i)perylene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	64.4%	2-Fluorobiphenyl	69.6%
d14-p-Terphenyl	61.2%	d4-1,2-Dichlorobenzene	59.2%
d5-Phenol	54.7%	2-Fluorophenol	40.8%
2,4,6-Tribromophenol	77.6%	d4-2-Chlorophenol	61.9%

EJB
9/12/05

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: Q-M-2005
SAMPLE

Lab Sample ID: IK93B
LIMS ID: 05-14179
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/29/05 16:37
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 15.2%
pH: 7.1

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	97	< 97 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	97	< 97 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	97	< 97 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	97	< 97 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	97	< 97 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	97	< 97 U
88-06-2	2,4,6-Trichlorophenol	97	< 97 U
95-95-4	2,4,5-Trichlorophenol	97	< 97 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	97	< 97 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	97	< 97 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	97	< 97 U
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	97	< 97 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: Q-M-2005
SAMPLE

Lab Sample ID: IK93B
LIMS ID: 05-14179
Matrix: Sediment
Date Analyzed: 08/29/05 16:37

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	97	< 97 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	< 19 U
100-01-6	4-Nitroaniline	97	< 97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	97	< 97 U
85-01-8	Phenanthrene	19	< 19 U
86-74-8	Carbazole	19	< 19 U
120-12-7	Anthracene	19	< 19 U
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**32**
129-00-0	**Pyrene**	**19**	**28**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	97	< 97 U
56-55-3	Benzo(a)anthracene	19	< 19 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**23 B** U
218-01-9	**Chrysene**	**19**	**21**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**20**
207-08-9	Benzo(k)fluoranthene	19	< 19 U
50-32-8	Benzo(a)pyrene	19	< 19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19	< 19 U
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	Benzo(g,h,i)perylene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	69.6%	2-Fluorobiphenyl	74.4%
d14-p-Terphenyl	65.2%	d4-1,2-Dichlorobenzene	63.6%
d5-Phenol	59.5%	2-Fluorophenol	42.9%
2,4,6-Tribromophenol	83.5%	d4-2-Chlorophenol	67.2%

EJB
9/12/05

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: R-M-2005
SAMPLE

Lab Sample ID: IK93C
LIMS ID: 05-14180
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/29/05 17:10
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 26.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 20.5%
pH: 6.9

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	96	< 96 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	96	< 96 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	96	< 96 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	96	< 96 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	96	< 96 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	96	< 96 U
88-06-2	2,4,6-Trichlorophenol	96	< 96 U
95-95-4	2,4,5-Trichlorophenol	96	< 96 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	96	< 96 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	96	< 96 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	96	< 96 U
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	96	< 96 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: R-M-2005
SAMPLE

Lab Sample ID: IK93C
LIMS ID: 05-14180
Matrix: Sediment
Date Analyzed: 08/29/05 17:10

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	96	< 96 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	< 19 U
100-01-6	4-Nitroaniline	96	< 96 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	96	< 96 U
85-01-8	Phenanthrene	19	< 19 U
86-74-8	Carbazole	19	< 19 U
120-12-7	Anthracene	19	< 19 U
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**32**
129-00-0	**Pyrene**	**19**	**27**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	96	< 96 U
56-55-3	Benzo(a)anthracene	19	< 19 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**32 B** U
218-01-9	**Chrysene**	**19**	**20**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	Benzo(b)fluoranthene	19	< 19 U
207-08-9	Benzo(k)fluoranthene	19	< 19 U
50-32-8	Benzo(a)pyrene	19	< 19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19	< 19 U
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	Benzo(g,h,i)perylene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	70.0%	2-Fluorobiphenyl	71.2%
d14-p-Terphenyl	58.4%	d4-1,2-Dichlorobenzene	65.6%
d5-Phenol	56.8%	2-Fluorophenol	43.5%
2,4,6-Tribromophenol	77.3%	d4-2-Chlorophenol	65.6%

EJB
9/12/05

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: S-M-2005
SAMPLE

Lab Sample ID: IK93A
LIMS ID: 05-14178
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/29/05 16:04
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 26.3 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 19.5%
pH: 6.9

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**19**	**20**
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	95	< 95 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	95	< 95 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	95	< 95 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	95	< 95 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	95	< 95 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	95	< 95 U
88-06-2	2,4,6-Trichlorophenol	95	< 95 U
95-95-4	2,4,5-Trichlorophenol	95	< 95 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	95	< 95 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	95	< 95 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	95	< 95 U
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	95	< 95 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: S-M-2005
SAMPLE

Lab Sample ID: IK93A
LIMS ID: 05-14178
Matrix: Sediment
Date Analyzed: 08/29/05 16:04

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	95	< 95 U
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	< 19 U
100-01-6	4-Nitroaniline	95	< 95 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	95	< 95 U
85-01-8	Phenanthrene	19	< 19 U
86-74-8	Carbazole	19	< 19 U
120-12-7	Anthracene	19	< 19 U
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	**Fluoranthene**	**19**	**33**
129-00-0	**Pyrene**	**19**	**28**
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	95	< 95 U
56-55-3	Benzo(a)anthracene	19	< 19 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**19**	**40 B** U
218-01-9	**Chrysene**	**19**	**21**
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	**Benzo(b)fluoranthene**	**19**	**20**
207-08-9	Benzo(k)fluoranthene	19	< 19 U
50-32-8	**Benzo(a)pyrene**	**19**	**19**
193-39-5	Indeno(1,2,3-cd)pyrene	19	< 19 U
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	Benzo(g,h,i)perylene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	74.8%	2-Fluorobiphenyl	77.6%
d14-p-Terphenyl	64.8%	d4-1,2-Dichlorobenzene	67.6%
d5-Phenol	65.1%	2-Fluorophenol	49.9%
2,4,6-Tribromophenol	86.4%	d4-2-Chlorophenol	74.7%

EJB
9/12/05

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: O-M-2005
MATRIX SPIKE

Lab Sample ID: IK93E
LIMS ID: 05-14182
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/29/05 18:49
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 16.2%
pH: 7.0

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	---
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	---
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	---
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	96	---
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	96	< 96 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	96	< 96 U
120-82-1	1,2,4-Trichlorobenzene	19	---
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	96	< 96 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	96	---
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	96	< 96 U
88-06-2	2,4,6-Trichlorophenol	96	< 96 U
95-95-4	2,4,5-Trichlorophenol	96	< 96 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	96	< 96 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	96	< 96 U
83-32-9	Acenaphthene	19	---
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	96	---
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	96	< 96 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: O-M-2005
MATRIX SPIKE

Lab Sample ID: IK93E
LIMS ID: 05-14182
Matrix: Sediment
Date Analyzed: 08/29/05 18:49

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	96	---
84-66-2	Diethylphthalate	19	< 19 U
7005-72-3	4-Chlorophenyl-phenylether	19	< 19 U
86-73-7	Fluorene	19	< 19 U
100-01-6	4-Nitroaniline	96	< 96 U
534-52-1	4,6-Dinitro-2-Methylphenol	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	19	< 19 U
118-74-1	Hexachlorobenzene	19	< 19 U
87-86-5	Pentachlorophenol	96	---
85-01-8	Phenanthrene	19	< 19 U
86-74-8	Carbazole	19	< 19 U
120-12-7	Anthracene	19	< 19 U
84-74-2	Di-n-Butylphthalate	19	< 19 U
206-44-0	Fluoranthene	19	< 19 U
129-00-0	Pyrene	19	---
85-68-7	Butylbenzylphthalate	19	< 19 U
91-94-1	3,3'-Dichlorobenzidine	96	< 96 U
56-55-3	Benzo(a)anthracene	19	< 19 U
117-81-7	bis(2-Ethylhexyl)phthalate	19	< 19 U
218-01-9	Chrysene	19	< 19 U
117-84-0	Di-n-Octyl phthalate	19	< 19 U
205-99-2	Benzo(b)fluoranthene	19	< 19 U
207-08-9	Benzo(k)fluoranthene	19	< 19 U
50-32-8	Benzo(a)pyrene	19	< 19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19	< 19 U
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
191-24-2	Benzo(g,h,i)perylene	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	68.8%	2-Fluorobiphenyl	72.0%
d14-p-Terphenyl	62.4%	d4-1,2-Dichlorobenzene	63.6%
d5-Phenol	64.0%	2-Fluorophenol	43.7%
2,4,6-Tribromophenol	88.0%	d4-2-Chlorophenol	66.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: O-M-2005
MATRIX SPIKE DUPLICATE

Lab Sample ID: IK93E
LIMS ID: 05-14182
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/29/05 19:21
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 16.2%
pH: 7.0

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	---
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	---
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	---
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	98	---
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	98	< 98 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	98	< 98 U
120-82-1	1,2,4-Trichlorobenzene	20	---
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	98	< 98 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	98	---
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	98	< 98 U
88-06-2	2,4,6-Trichlorophenol	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	98	< 98 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	98	< 98 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	98	< 98 U
83-32-9	Acenaphthene	20	---
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	98	---
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	98	< 98 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: O-M-2005
MATRIX SPIKE DUPLICATE

Lab Sample ID: IK93E
LIMS ID: 05-14182
Matrix: Sediment
Date Analyzed: 08/29/05 19:21

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	98	---
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	98	< 98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	98	---
85-01-8	Phenanthrene	20	< 20 U
86-74-8	Carbazole	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	Fluoranthene	20	< 20 U
129-00-0	Pyrene	20	---
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	98	< 98 U
56-55-3	Benzo(a)anthracene	20	< 20 U
117-81-7	bis(2-Ethylhexyl)phthalate	20	< 20 U
218-01-9	Chrysene	20	< 20 U
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	Benzo(b)fluoranthene	20	< 20 U
207-08-9	Benzo(k)fluoranthene	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	20	< 20 U

Reported in μg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	65.2%	2-Fluorobiphenyl	69.6%
d14-p-Terphenyl	61.2%	d4-1,2-Dichlorobenzene	62.4%
d5-Phenol	58.9%	2-Fluorophenol	40.5%
2,4,6-Tribromophenol	84.5%	d4-2-Chlorophenol	61.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: MB-082605
METHOD BLANK

Lab Sample ID: MB-082605
LIMS ID: 05-14182
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Date Extracted: 08/26/05
Date Analyzed: 08/29/05 13:20
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 25.0 g
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: NA
pH: NA

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	100	< 100 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	100	< 100 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	100	< 100 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	100	< 100 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	100	< 100 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	100	< 100 U
88-06-2	2,4,6-Trichlorophenol	100	< 100 U
95-95-4	2,4,5-Trichlorophenol	100	< 100 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	100	< 100 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	100	< 100 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	100	< 100 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	100	< 100 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: MB-082605
METHOD BLANK

Lab Sample ID: MB-082605
LIMS ID: 05-14182
Matrix: Sediment
Date Analyzed: 08/29/05 13:20

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	100	< 100 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	100	< 100 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	100	< 100 U
85-01-8	Phenanthrene	20	< 20 U
86-74-8	Carbazole	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	Di-n-Butylphthalate	20	< 20 U
206-44-0	Fluoranthene	20	< 20 U
129-00-0	Pyrene	20	< 20 U
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	100	< 100 U
56-55-3	Benzo(a)anthracene	20	< 20 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**10 J**
218-01-9	Chrysene	20	< 20 U
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	Benzo(b)fluoranthene	20	< 20 U
207-08-9	Benzo(k)fluoranthene	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	68.4%	2-Fluorobiphenyl	67.6%
d14-p-Terphenyl	84.8%	d4-1,2-Dichlorobenzene	69.6%
d5-Phenol	60.0%	2-Fluorophenol	50.1%
2,4,6-Tribromophenol	88.3%	d4-2-Chlorophenol	68.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: MB-082605
METHOD BLANK

Lab Sample ID: MB-082605
LIMS ID: 05-14198
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Date Extracted: 08/26/05
Date Analyzed: 08/30/05 15:53
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 25.0 g
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: NA
pH: NA

CAS Number	Analyte	RL	Result
108-95-2	Phenol	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	20	< 20 U
95-57-8	2-Chlorophenol	20	< 20 U
541-73-1	1,3-Dichlorobenzene	20	< 20 U
106-46-7	1,4-Dichlorobenzene	20	< 20 U
100-51-6	Benzyl Alcohol	20	< 20 U
95-50-1	1,2-Dichlorobenzene	20	< 20 U
95-48-7	2-Methylphenol	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20	< 20 U
106-44-5	4-Methylphenol	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	100	< 100 U
67-72-1	Hexachloroethane	20	< 20 U
98-95-3	Nitrobenzene	20	< 20 U
78-59-1	Isophorone	20	< 20 U
88-75-5	2-Nitrophenol	100	< 100 U
105-67-9	2,4-Dimethylphenol	20	< 20 U
65-85-0	Benzoic Acid	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	20	< 20 U
120-83-2	2,4-Dichlorophenol	100	< 100 U
120-82-1	1,2,4-Trichlorobenzene	20	< 20 U
91-20-3	Naphthalene	20	< 20 U
106-47-8	4-Chloroaniline	100	< 100 U
87-68-3	Hexachlorobutadiene	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	100	< 100 U
91-57-6	2-Methylnaphthalene	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	100	< 100 U
88-06-2	2,4,6-Trichlorophenol	100	< 100 U
95-95-4	2,4,5-Trichlorophenol	100	< 100 U
91-58-7	2-Chloronaphthalene	20	< 20 U
88-74-4	2-Nitroaniline	100	< 100 U
131-11-3	Dimethylphthalate	20	< 20 U
208-96-8	Acenaphthylene	20	< 20 U
99-09-2	3-Nitroaniline	100	< 100 U
83-32-9	Acenaphthene	20	< 20 U
51-28-5	2,4-Dinitrophenol	200	< 200 U
100-02-7	4-Nitrophenol	100	< 100 U
132-64-9	Dibenzofuran	20	< 20 U
606-20-2	2,6-Dinitrotoluene	100	< 100 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: MB-082605
METHOD BLANK

Lab Sample ID: MB-082605
LIMS ID: 05-14198
Matrix: Sediment
Date Analyzed: 08/30/05 15:53

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	100	< 100 U
84-66-2	Diethylphthalate	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	20	< 20 U
86-73-7	Fluorene	20	< 20 U
100-01-6	4-Nitroaniline	100	< 100 U
534-52-1	4,6-Dinitro-2-Methylphenol	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	20	< 20 U
118-74-1	Hexachlorobenzene	20	< 20 U
87-86-5	Pentachlorophenol	100	< 100 U
85-01-8	Phenanthrene	20	< 20 U
86-74-8	Carbazole	20	< 20 U
120-12-7	Anthracene	20	< 20 U
84-74-2	**Di-n-Butylphthalate**	**20**	**72**
206-44-0	Fluoranthene	20	< 20 U
129-00-0	Pyrene	20	< 20 U
85-68-7	Butylbenzylphthalate	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	100	< 100 U
56-55-3	Benzo(a)anthracene	20	< 20 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**11 J**
218-01-9	Chrysene	20	< 20 U
117-84-0	Di-n-Octyl phthalate	20	< 20 U
205-99-2	Benzo(b)fluoranthene	20	< 20 U
207-08-9	Benzo(k)fluoranthene	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	64.4%	2-Fluorobiphenyl	63.2%
d14-p-Terphenyl	80.4%	d4-1,2-Dichlorobenzene	64.8%
d5-Phenol	63.7%	2-Fluorophenol	58.1%
2,4,6-Tribromophenol	74.4%	d4-2-Chlorophenol	66.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: SQ-1 082605
STANDARD REFERENCE

Lab Sample ID: SRM-082605
LIMS ID: 05-14183
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Date Extracted: 08/26/05
Date Analyzed: 08/29/05 14:58
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 17.9 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 40.2%
pH: NA

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**28**	**30**
111-44-4	Bis-(2-Chloroethyl) Ether	28	< 28 U
95-57-8	2-Chlorophenol	28	< 28 U
541-73-1	**1,3-Dichlorobenzene**	**28**	**23 J**
106-46-7	1,4-Dichlorobenzene	28	< 28 U
100-51-6	Benzyl Alcohol	28	< 28 U
95-50-1	1,2-Dichlorobenzene	28	< 28 U
95-48-7	2-Methylphenol	28	< 28 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	28	< 28 U
106-44-5	**4-Methylphenol**	**28**	**45**
621-64-7	N-Nitroso-Di-N-Propylamine	140	< 140 U
67-72-1	Hexachloroethane	28	< 28 U
98-95-3	Nitrobenzene	28	< 28 U
78-59-1	**Isophorone**	**28**	**65**
88-75-5	2-Nitrophenol	140	< 140 U
105-67-9	2,4-Dimethylphenol	28	< 28 U
65-85-0	Benzoic Acid	280	< 280 U
111-91-1	bis(2-Chloroethoxy) Methane	28	< 28 U
120-83-2	2,4-Dichlorophenol	140	< 140 U
120-82-1	1,2,4-Trichlorobenzene	28	< 28 U
91-20-3	**Naphthalene**	**28**	**52**
106-47-8	4-Chloroaniline	140	< 140 U
87-68-3	Hexachlorobutadiene	28	< 28 U
59-50-7	4-Chloro-3-methylphenol	140	< 140 U
91-57-6	**2-Methylnaphthalene**	**28**	**85**
77-47-4	Hexachlorocyclopentadiene	140	< 140 U
88-06-2	2,4,6-Trichlorophenol	140	< 140 U
95-95-4	2,4,5-Trichlorophenol	140	< 140 U
91-58-7	2-Chloronaphthalene	28	< 28 U
88-74-4	2-Nitroaniline	140	< 140 U
131-11-3	Dimethylphthalate	28	< 28 U
208-96-8	**Acenaphthylene**	**28**	**30**
99-09-2	3-Nitroaniline	140	< 140 U
83-32-9	**Acenaphthene**	**28**	**99**
51-28-5	2,4-Dinitrophenol	280	< 280 U
100-02-7	4-Nitrophenol	140	< 140 U
132-64-9	Dibenzofuran	28	< 28 U
606-20-2	2,6-Dinitrotoluene	140	< 140 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: SQ-1 082605
STANDARD REFERENCE

Lab Sample ID: SRM-082605
LIMS ID: 05-14183
Matrix: Sediment
Date Analyzed: 08/29/05 14:58

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	140	< 140 U
84-66-2	Diethylphthalate	28	< 28 U
7005-72-3	**4-Chlorophenyl-phenylether**	**28**	**110**
86-73-7	**Fluorene**	**28**	**77**
100-01-6	4-Nitroaniline	140	< 140 U
534-52-1	4,6-Dinitro-2-Methylphenol	280	< 280 U
86-30-6	N-Nitrosodiphenylamine	28	< 28 U
101-55-3	**4-Bromophenyl-phenylether**	**28**	**270**
118-74-1	Hexachlorobenzene	28	< 28 U
87-86-5	**Pentachlorophenol**	**140**	**520**
85-01-8	**Phenanthrene**	**28**	**170**
86-74-8	Carbazole	28	< 28 U
120-12-7	**Anthracene**	**28**	**120**
84-74-2	**Di-n-Butylphthalate**	**28**	**65** U
206-44-0	**Fluoranthene**	**28**	**140**
129-00-0	**Pyrene**	**28**	**120**
85-68-7	Butylbenzylphthalate	28	< 28 U
91-94-1	3,3'-Dichlorobenzidine	140	< 140 U
56-55-3	**Benzo(a)anthracene**	**28**	**110**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**28**	**82 B** U
218-01-9	**Chrysene**	**28**	**110**
117-84-0	Di-n-Octyl phthalate	28	< 28 U
205-99-2	**Benzo(b)fluoranthene**	**28**	**120**
207-08-9	Benzo(k)fluoranthene	28	< 28 U
50-32-8	**Benzo(a)pyrene**	**28**	**130**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**28**	**23 J**
53-70-3	**Dibenz(a,h)anthracene**	**28**	**130**
191-24-2	**Benzo(g,h,i)perylene**	**28**	**120**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	67.6%	2-Fluorobiphenyl	71.2%
d14-p-Terphenyl	74.0%	d4-1,2-Dichlorobenzene	61.2%
d5-Phenol	60.8%	2-Fluorophenol	52.0%
2,4,6-Tribromophenol	82.9%	d4-2-Chlorophenol	67.2%

EJB
9/12/05

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: SQ-1 082605
STANDARD REFERENCE

Lab Sample ID: SRM-082605
LIMS ID: 05-14198
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Date Extracted: 08/26/05
Date Analyzed: 08/30/05 16:59
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 18.0 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 40.2%
pH: NA

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**28**	**55**
111-44-4	Bis-(2-Chloroethyl) Ether	28	< 28 U
95-57-8	2-Chlorophenol	28	< 28 U
541-73-1	**1,3-Dichlorobenzene**	**28**	**16 J**
106-46-7	1,4-Dichlorobenzene	28	< 28 U
100-51-6	Benzyl Alcohol	28	< 28 U
95-50-1	1,2-Dichlorobenzene	28	< 28 U
95-48-7	2-Methylphenol	28	< 28 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	28	< 28 U
106-44-5	**4-Methylphenol**	**28**	**47**
621-64-7	N-Nitroso-Di-N-Propylamine	140	< 140 U
67-72-1	Hexachloroethane	28	< 28 U
98-95-3	Nitrobenzene	28	< 28 U
78-59-1	**Isophorone**	**28**	**71**
88-75-5	2-Nitrophenol	140	< 140 U
105-67-9	2,4-Dimethylphenol	28	< 28 U
65-85-0	Benzoic Acid	280	< 280 U
111-91-1	bis(2-Chloroethoxy) Methane	28	< 28 U
120-83-2	2,4-Dichlorophenol	140	< 140 U
120-82-1	1,2,4-Trichlorobenzene	28	< 28 U
91-20-3	**Naphthalene**	**28**	**39**
106-47-8	4-Chloroaniline	140	< 140 U
87-68-3	Hexachlorobutadiene	28	< 28 U
59-50-7	4-Chloro-3-methylphenol	140	< 140 U
91-57-6	**2-Methylnaphthalene**	**28**	**48**
77-47-4	Hexachlorocyclopentadiene	140	< 140 U
88-06-2	2,4,6-Trichlorophenol	140	< 140 U
95-95-4	2,4,5-Trichlorophenol	140	< 140 U
91-58-7	2-Chloronaphthalene	28	< 28 U
88-74-4	2-Nitroaniline	140	< 140 U
131-11-3	Dimethylphthalate	28	< 28 U
208-96-8	Acenaphthylene	28	< 28 U
99-09-2	3-Nitroaniline	140	< 140 U
83-32-9	**Acenaphthene**	**28**	**49**
51-28-5	2,4-Dinitrophenol	280	< 280 U
100-02-7	4-Nitrophenol	140	< 140 U
132-64-9	Dibenzofuran	28	< 28 U
606-20-2	2,6-Dinitrotoluene	140	< 140 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: SQ-1 082605
STANDARD REFERENCE

Lab Sample ID: SRM-082605
LIMS ID: 05-14198
Matrix: Sediment
Date Analyzed: 08/30/05 16:59

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
121-14-2	2,4-Dinitrotoluene	140	< 140 U
84-66-2	Diethylphthalate	28	< 28 U
7005-72-3	**4-Chlorophenyl-phenylether**	**28**	**46**
86-73-7	**Fluorene**	**28**	**33**
100-01-6	4-Nitroaniline	140	< 140 U
534-52-1	4,6-Dinitro-2-Methylphenol	280	< 280 U
86-30-6	N-Nitrosodiphenylamine	28	< 28 U
101-55-3	**4-Bromophenyl-phenylether**	**28**	**110**
118-74-1	Hexachlorobenzene	28	< 28 U
87-86-5	**Pentachlorophenol**	**140**	**310**
85-01-8	**Phenanthrene**	**28**	**62**
86-74-8	Carbazole	28	< 28 U
120-12-7	**Anthracene**	**28**	**44**
84-74-2	**Di-n-Butylphthalate**	**28**	**120** U
206-44-0	**Fluoranthene**	**28**	**53**
129-00-0	**Pyrene**	**28**	**55**
85-68-7	Butylbenzylphthalate	28	< 28 U
91-94-1	3,3'-Dichlorobenzidine	140	< 140 U
56-55-3	**Benzo(a)anthracene**	**28**	**36**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**28**	**30 B** U
218-01-9	**Chrysene**	**28**	**46**
117-84-0	Di-n-Octyl phthalate	28	< 28 U
205-99-2	**Benzo(b)fluoranthene**	**28**	**32**
207-08-9	Benzo(k)fluoranthene	28	< 28 U
50-32-8	**Benzo(a)pyrene**	**28**	**41**
193-39-5	Indeno(1,2,3-cd)pyrene	28	< 28 U
53-70-3	**Dibenz(a,h)anthracene**	**28**	**68**
191-24-2	**Benzo(g,h,i)perylene**	**28**	**75**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	56.8%	2-Fluorobiphenyl	60.0%
d14-p-Terphenyl	75.2%	d4-1,2-Dichlorobenzene	52.0%
d5-Phenol	57.1%	2-Fluorophenol	51.5%
2,4,6-Tribromophenol	71.7%	d4-2-Chlorophenol	59.2%

EJB
9/12/05

ANALYTICAL RESOURCES INCORPORATED

SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
S-M-2005	74.8%	77.6%	64.8%	67.6%	65.1%	49.9%	86.4%	74.7%	0
Q-M-2005	69.6%	74.4%	65.2%	63.6%	59.5%	42.9%	83.5%	67.2%	0
R-M-2005	70.0%	71.2%	58.4%	65.6%	56.8%	43.5%	77.3%	65.6%	0
P-M-2005	64.4%	69.6%	61.2%	59.2%	54.7%	40.8%	77.6%	61.9%	0
MB-082605	68.4%	67.6%	84.8%	69.6%	60.0%	50.1%	88.3%	68.5%	0
LCS-082605	71.2%	73.2%	92.8%	72.0%	71.5%	49.3%	91.7%	72.0%	0
LCSD-082605	67.6%	68.4%	82.4%	68.0%	65.6%	48.3%	86.7%	67.5%	0
O-M-2005	61.2%	66.0%	56.4%	57.2%	48.3%	39.5%	72.5%	56.8%	0
O-M-2005 MS	68.8%	72.0%	62.4%	63.6%	64.0%	43.7%	88.0%	66.9%	0
O-M-2005 MSD	65.2%	69.6%	61.2%	62.4%	58.9%	40.5%	84.5%	61.9%	0
SRM-SQ-1	67.6%	71.2%	74.0%	61.2%	60.8%	52.0%	82.9%	67.2%	0
M-M-2005	60.8%	58.8%	80.0%	57.2%	53.9%	46.1%	84.3%	60.3%	0
M-M-2005 DL	62.4%	64.8%	56.3%	60.5%	41.7%	48.6%	64.8%	56.5%	0
MD-M-2005	69.2%	66.0%	101%	62.4%	62.1%	55.5%	102%	67.7%	0
MD-M-2005 DL	68.5%	72.0%	64.8%	65.4%	48.1%	51.1%	71.8%	61.0%	0
L-M-2005	62.8%	60.4%	92.0%	58.8%	56.3%	50.9%	90.4%	61.6%	0
L-M-2005 DL	61.4%	64.7%	59.6%	61.6%	37.2%	46.2%	68.2%	55.4%	0
J-M-2005	70.8%	67.6%	108%	64.4%	64.0%	62.9%	101%	70.7%	0
J-M-2005 DL	70.3%	74.5%	67.1%	64.8%	49.3%	56.4%	77.7%	65.1%	0
HI-M-2005	65.6%	64.4%	100%	62.0%	59.5%	50.7%	92.8%	64.5%	0
HI-M-2005 DL	63.4%	67.1%	63.5%	62.4%	42.4%	47.4%	67.5%	57.0%	0
G-M-2005	69.2%	63.6%	108%	64.4%	64.0%	49.1%	97.6%	69.6%	0
G-M-2005 DL	76.7%	80.5%	75.5%	73.0%	52.6%	60.2%	82.4%	71.1%	0
A-2-M-2005	66.8%	64.8%	103%	65.6%	59.2%	45.6%	86.7%	67.2%	0
A-2-M-2005 DL	65.5%	63.6%	65.0%	65.5%	46.1%	51.6%	67.6%	57.4%	0
N-M-2005	70.0%	70.4%	64.4%	65.6%	54.9%	41.1%	83.5%	63.7%	0
K-M-2005	68.8%	65.2%	115%	64.8%	60.5%	61.3%	91.5%	68.3%	0
K-M-2005 DL	62.9%	58.2%	66.8%	62.4%	41.5%	49.2%	64.7%	56.6%	0
F-2-M-2005	73.2%	73.2%	66.8%	66.4%	65.3%	48.0%	90.1%	71.5%	0
F-1-M-2005	69.2%	72.0%	62.4%	64.8%	61.9%	54.1%	84.0%	67.2%	0
FD-1-M-2005	67.6%	71.6%	66.0%	60.4%	62.9%	40.5%	90.9%	67.2%	0
E-M-2005	69.2%	68.4%	68.4%	64.8%	59.7%	46.4%	88.5%	66.1%	0
CD-M-2005	70.8%	71.6%	80.8%	64.0%	66.1%	62.1%	99.7%	71.5%	0
AB-M-2005	66.4%	64.0%	83.6%	63.6%	57.1%	57.6%	85.6%	65.3%	0
AB-M-2005 DL	68.2%	66.8%	62.4%	56.6%	64.5%	69.5%	62.7%	63.3%	0
MB-082605	64.4%	63.2%	80.4%	64.8%	63.7%	58.1%	74.4%	66.7%	0
LCS-082605	64.4%	64.0%	78.8%	65.2%	64.8%	58.7%	74.4%	65.6%	0
SRM-SQ-1	56.8%	60.0%	75.2%	52.0%	57.1%	51.5%	71.7%	59.2%	0
B-2-M-2005	61.6%	63.6%	50.4%	57.6%	58.1%	55.5%	63.7%	63.5%	0

FORM-II SW8270

ANALYTICAL RESOURCES INCORPORATED

SW8270 SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

	LCS/MB LIMITS	QC LIMITS

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(39-93)	(28-103)
(FBP) = 2-Fluorobiphenyl	(40-95)	(33-104)
(TPH) = d14-p-Terphenyl	(46-116)	(31-120)
(DCB) = d4-1,2-Dichlorobenzene	(41-86)	(30-84)
(PHL) = d5-Phenol	(45-91)	(29-109)
(2FP) = 2-Fluorophenol	(36-100)	(24-112)
(TBP) = 2,4,6-Tribromophenol	(34-110)	(27-134)
(2CP) = d4-2-Chlorophenol	(46-89)	(34-101)

Prep Method: SW3550B
Log Number Range: 05-14178 to 05-14198

FORM-II SW8270

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: O-M-2005
MS/MSD

Lab Sample ID: IK93E
LIMS ID: 05-14182
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted MS/MSD: 08/26/05

Date Analyzed MS: 08/29/05 18:49
MSD: 08/29/05 19:21
Instrument/Analyst MS: NT6/LJR
MSD: NT6/LJR
GPC Cleanup: NO

Sample Amount MS: 25.9 g-dry-wt
MSD: 25.5 g-dry-wt
Final Extract Volume MS: 0.5 mL
MSD: 0.5 mL
Dilution Factor MS: 1.00
MSD: 1.00
Percent Moisture: 16.2%
pH: 7.0

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Phenol	< 19.4	399	724	55.1%	411	736	55.8%	3.0%
2-Chlorophenol	< 19.4	449	724	62.0%	475	736	64.5%	5.6%
1,4-Dichlorobenzene	< 19.4	281	482	58.3%	304	490	62.0%	7.9%
N-Nitroso-Di-N-Propylamine	< 97.1	288	482	59.8%	315	490	64.3%	9.0%
1,2,4-Trichlorobenzene	< 19.4	311	482	64.5%	333	490	68.0%	6.8%
4-Chloro-3-methylphenol	< 97.1	532	724	73.5%	558	736	75.8%	4.8%
Acenaphthene	< 19.4	325	482	67.4%	357	490	72.9%	9.4%
4-Nitrophenol	< 97.1	701	724	96.8%	611	736	83.0%	13.7%
2,4-Dinitrotoluene	< 97.1	343	482	71.2%	368	490	75.1%	7.0%
Pentachlorophenol	< 97.1	728	724	101%	789	736	107%	8.0%
Pyrene	< 19.4	288	482	59.8%	322	490	65.7%	11.1%

Results reported in µg/kg
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: LCS-082605
LCS/LCSD

Lab Sample ID: LCS-082605
LIMS ID: 05-14182
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted LCS/LCSD: 08/26/05

Date Analyzed LCS: 08/29/05 13:53
LCSD: 08/29/05 14:26
Instrument/Analyst LCS: NT6/LJR
LCSD: NT6/LJR
GPC Cleanup: NO

Sample Amount LCS: 25.0 g
LCSD: 25.0 g
Final Extract Volume LCS: 0.5 mL
LCSD: 0.5 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Percent Moisture: NA
pH: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Phenol	505	750	67.3%	455	750	60.7%	10.4%
2-Chlorophenol	538	750	71.7%	495	750	66.0%	8.3%
1,4-Dichlorobenzene	338	500	67.6%	313	500	62.6%	7.7%
N-Nitroso-Di-N-Propylamine	360	500	72.0%	332	500	66.4%	8.1%
1,2,4-Trichlorobenzene	357	500	71.4%	332	500	66.4%	7.3%
4-Chloro-3-methylphenol	636	750	84.8%	559	750	74.5%	12.9%
Acenaphthene	370	500	74.0%	342	500	68.4%	7.9%
4-Nitrophenol	845	750	113%	678	750	90.4%	21.9%
2,4-Dinitrotoluene	420	500	84.0%	372	500	74.4%	12.1%
Pentachlorophenol	738	750	98.4%	680	750	90.7%	8.2%
Pyrene	433	500	86.6%	379	500	75.8%	13.3%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	71.2%	67.6%
2-Fluorobiphenyl	73.2%	68.4%
d14-p-Terphenyl	92.8%	82.4%
d4-1,2-Dichlorobenzene	72.0%	68.0%
d5-Phenol	71.5%	65.6%
2-Fluorophenol	49.3%	48.3%
2,4,6-Tribromophenol	91.7%	86.7%
d4-2-Chlorophenol	72.0%	67.5%

Results reported in µg/kg
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: LCS-082605
LAB CONTROL

Lab Sample ID: LCS-082605
LIMS ID: 05-14198
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/30/05 16:26
Instrument/Analyst: NT6/LJR
GPC Cleanup: NO

Sample Amount: 25.0 g
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: NA
pH: NA

Analyte	Lab Control	Spike Added	Recovery
Phenol	431	750	57.5%
2-Chlorophenol	459	750	61.2%
1,4-Dichlorobenzene	292	500	58.4%
N-Nitroso-Di-N-Propylamine	318	500	63.6%
1,2,4-Trichlorobenzene	304	500	60.8%
4-Chloro-3-methylphenol	536	750	71.5%
Acenaphthene	311	500	62.2%
4-Nitrophenol	617	750	82.3%
2,4-Dinitrotoluene	343	500	68.6%
Pentachlorophenol	566	750	75.5%
Pyrene	372	500	74.4%

Semivolatile Surrogate Recovery

d5-Nitrobenzene	64.4%
2-Fluorobiphenyl	64.0%
d14-p-Terphenyl	78.8%
d4-1,2-Dichlorobenzene	65.2%
d5-Phenol	64.8%
2-Fluorophenol	58.7%
2,4,6-Tribromophenol	74.4%
d4-2-Chlorophenol	65.6%

Results reported in µg/kg

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: RINSEATE BLANK SAMPLE

Lab Sample ID: IK93V
LIMS ID: 05-14199
Matrix: Water
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1 7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/23/05
Date Analyzed: 08/25/05 18:39
Instrument/Analyst: NT4/LJR

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0	< 1.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	5.0	< 5.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	5.0	< 5.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
91-20-3	Naphthalene	1.0	< 1.0 U
106-47-8	4-Chloroaniline	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 U
91-57-6	2-Methylnaphthalene	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0	< 5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U
84-66-2	Diethylphthalate	1.0	< 1.0 U

EJB
9/12/05

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: RINSEATE BLANK SAMPLE

Lab Sample ID: IK93V
LIMS ID: 05-14199
Matrix: Water
Date Analyzed: 08/25/05 18:39

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
86-73-7	Fluorene	1.0	< 1.0 U
100-01-6	4-Nitroaniline	5.0	< 5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	5.0	< 5.0 U
85-01-8	Phenanthrene	1.0	< 1.0 U
86-74-8	Carbazole	1.0	< 1.0 U
120-12-7	Anthracene	1.0	< 1.0 U
84-74-2	**Di-n-Butylphthalate**	**1.0**	**1.3 B** U
206-44-0	Fluoranthene	1.0	< 1.0 U
129-00-0	Pyrene	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U
218-01-9	Chrysene	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U
205-99-2	Benzo(b)fluoranthene	1.0	< 1.0 U
207-08-9	Benzo(k)fluoranthene	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0	< 1.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.8%	2-Fluorobiphenyl	60.0%
d14-p-Terphenyl	66.8%	d4-1,2-Dichlorobenzene	61.6%
d5-Phenol	53.6%	2-Fluorophenol	50.7%
2,4,6-Tribromophenol	50.7%	d4-2-Chlorophenol	58.7%

EJB
9/12/05

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: RINSEATE BLANK SAMPLE

Lab Sample ID: IK93V
LIMS ID: 05-15117
Matrix: Water
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1 7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/30/05
Date Analyzed: 08/31/05 20:17
Instrument/Analyst: NT6/LJR

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0	< 1.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	1.0	< 1.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	5.0	< 5.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
91-20-3	Naphthalene	1.0	< 1.0 U
106-47-8	4-Chloroaniline	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 U
91-57-6	2-Methylnaphthalene	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0	< 5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U
84-66-2	**Diethylphthalate**	**1.0**	**8.2**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: RINSEATE BLANK SAMPLE

Lab Sample ID: IK93V
LIMS ID: 05-15117
Matrix: Water
Date Analyzed: 08/31/05 20:17

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
86-73-7	Fluorene	1.0	< 1.0 U
100-01-6	4-Nitroaniline	5.0	< 5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	5.0	< 5.0 U
85-01-8	Phenanthrene	1.0	< 1.0 U
86-74-8	Carbazole	1.0	< 1.0 U
120-12-7	Anthracene	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	1.0	< 1.0 U
206-44-0	Fluoranthene	1.0	< 1.0 U
129-00-0	Pyrene	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U
218-01-9	Chrysene	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U
205-99-2	Benzo(b)fluoranthene	1.0	< 1.0 U
207-08-9	Benzo(k)fluoranthene	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0	< 1.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	77.2%	2-Fluorobiphenyl	70.4%
d14-p-Terphenyl	77.2%	d4-1,2-Dichlorobenzene	66.0%
d5-Phenol	66.1%	2-Fluorophenol	64.5%
2,4,6-Tribromophenol	83.5%	d4-2-Chlorophenol	76.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: MB-082305
METHOD BLANK

Lab Sample ID: MB-082305
LIMS ID: 05-14199
Matrix: Water
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Date Extracted: 08/23/05
Date Analyzed: 08/25/05 15:51
Instrument/Analyst: NT4/LJR

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0	< 1.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	5.0	< 5.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	5.0	< 5.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
91-20-3	Naphthalene	1.0	< 1.0 U
106-47-8	4-Chloroaniline	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 U
91-57-6	2-Methylnaphthalene	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0	< 5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U
84-66-2	Diethylphthalate	1.0	< 1.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: MB-082305
METHOD BLANK

Lab Sample ID: MB-082305
LIMS ID: 05-14199
Matrix: Water
Date Analyzed: 08/25/05 15:51

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
86-73-7	Fluorene	1.0	< 1.0 U
100-01-6	4-Nitroaniline	5.0	< 5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	5.0	< 5.0 U
85-01-8	Phenanthrene	1.0	< 1.0 U
86-74-8	Carbazole	1.0	< 1.0 U
120-12-7	Anthracene	1.0	< 1.0 U
84-74-2	**Di-n-Butylphthalate**	**1.0**	**0.9 J**
206-44-0	Fluoranthene	1.0	< 1.0 U
129-00-0	Pyrene	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U
218-01-9	Chrysene	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U
205-99-2	Benzo(b)fluoranthene	1.0	< 1.0 U
207-08-9	Benzo(k)fluoranthene	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0	< 1.0 U

Reported in μg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	78.4%	2-Fluorobiphenyl	72.4%
d14-p-Terphenyl	80.8%	d4-1,2-Dichlorobenzene	66.0%
d5-Phenol	63.5%	2-Fluorophenol	56.8%
2,4,6-Tribromophenol	68.3%	d4-2-Chlorophenol	71.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: MB-083005
METHOD BLANK

Lab Sample ID: MB-083005
LIMS ID: 05-15117
Matrix: Water
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Date Extracted: 08/30/05
Date Analyzed: 08/31/05 17:31
Instrument/Analyst: NT6/LJR

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0	< 1.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	1.0	< 1.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	5.0	< 5.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
91-20-3	Naphthalene	1.0	< 1.0 U
106-47-8	4-Chloroaniline	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 U
91-57-6	2-Methylnaphthalene	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0	< 5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U
84-66-2	Diethylphthalate	1.0	< 1.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: MB-083005
METHOD BLANK

Lab Sample ID: MB-083005
LIMS ID: 05-15117
Matrix: Water
Date Analyzed: 08/31/05 17:31

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

CAS Number	Analyte	RL	Result
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
86-73-7	Fluorene	1.0	< 1.0 U
100-01-6	4-Nitroaniline	5.0	< 5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	5.0	< 5.0 U
85-01-8	Phenanthrene	1.0	< 1.0 U
86-74-8	Carbazole	1.0	< 1.0 U
120-12-7	Anthracene	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	1.0	< 1.0 U
206-44-0	Fluoranthene	1.0	< 1.0 U
129-00-0	Pyrene	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U
218-01-9	Chrysene	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U
205-99-2	Benzo(b)fluoranthene	1.0	< 1.0 U
207-08-9	Benzo(k)fluoranthene	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0	< 1.0 U

Reported in μg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	79.6%	2-Fluorobiphenyl	69.6%
d14-p-Terphenyl	79.6%	d4-1,2-Dichlorobenzene	62.8%
d5-Phenol	75.2%	2-Fluorophenol	69.9%
2,4,6-Tribromophenol	83.7%	d4-2-Chlorophenol	81.1%

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-082305	78.4%	72.4%	80.8%	66.0%	63.5%	56.8%	68.3%	71.2%	0
LCS-082305	62.8%	55.2%	66.4%	48.4%	51.2%	50.4%	54.1%	58.4%	0
LCSD-082305	63.2%	58.0%	64.0%	54.8%	53.6%	49.9%	43.5%	58.7%	0
RINSEATE BLANK	62.8%	60.0%	66.8%	61.6%	53.6%	50.7%	50.7%	58.7%	0
MB-083005	79.6%	69.6%	79.6%	62.8%	75.2%	69.9%	83.7%	81.1%	0
LCS-083005	78.8%	69.6%	78.4%	63.2%	76.8%	69.3%	81.3%	77.3%	0
LCSD-083005	76.4%	71.2%	75.6%	74.4%	76.3%	66.9%	81.1%	76.8%	0
RINSEATE BLANK	77.2%	70.4%	77.2%	66.0%	66.1%	64.5%	83.5%	76.5%	0

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(44-107)	(38-111)
(FBP) = 2-Fluorobiphenyl	(43-99)	(30-109)
(TPH) = d14-p-Terphenyl	(44-123)	(37-113)
(DCB) = d4-1,2-Dichlorobenzene	(36-88)	(35-88)
(PHL) = d5-Phenol	(47-101)	(42-98)
(2FP) = 2-Fluorophenol	(44-102)	(40-99)
(TBP) = 2,4,6-Tribromophenol	(38-116)	(27-136)
(2CP) = d4-2-Chlorophenol	(50-102)	(47-101)

Prep Method: SW3520C
Log Number Range: 05-14199 to 05-15117

FORM-II SW8270

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCS-082305
LCS/LCSD

Lab Sample ID: LCS-082305
LIMS ID: 05-14199
Matrix: Water
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted LCS/LCSD: 08/23/05

Date Analyzed LCS: 08/25/05 16:25
LCSD: 08/25/05 16:58
Instrument/Analyst LCS: NT4/LJR
LCSD: NT4/LJR
GPC Cleanup: NO

Sample Amount LCS: 500 mL
LCSD: 500 mL
Final Extract Volume LCS: 0.50 mL
LCSD: 0.50 mL
Dilution Factor LCS: 1.00
LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Phenol	2.0	3.8	52.6%	2.2	3.8	57.9%	10.2%
2-Chlorophenol	2.2	3.8	57.9%	2.1	3.8	55.3%	1.4%
1,4-Dichlorobenzene	1.1	2.5	44.0%	1.4	2.5	56.0%	20.5%
N-Nitroso-Di-N-Propylamine	1.5	2.5	60.0%	1.6	2.5	64.0%	2.0%
1,2,4-Trichlorobenzene	1.2	2.5	48.0%	1.4	2.5	56.0%	14.1%
Naphthalene	1.6	2.5	64.0%	1.6	2.5	64.0%	0.0%
4-Chloro-3-methylphenol	2.2	3.8	57.9%	2.0	3.8	52.6%	8.7%
Acenaphthene	3.1	5.0	62.0%	3.1	5.0	62.0%	1.9%
4-Nitrophenol	1.3	3.8	34.2%	1.3	3.8	34.2%	0.0%
2,4-Dinitrotoluene	1.2	2.5	48.0%	1.3	2.5	52.0%	6.4%
Pentachlorophenol	1.7	3.8	44.7%	1.4	3.8	36.8%	15.3%
Fluoranthene	1.8	2.5	72.0%	1.8	2.5	72.0%	1.1%
Pyrene	1.6	2.5	64.0%	1.6	2.5	64.0%	0.6%
Benzo(a)anthracene	1.9	2.5	76.0%	1.8	2.5	72.0%	3.8%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	62.8%	63.2%
2-Fluorobiphenyl	55.2%	58.0%
d14-p-Terphenyl	66.4%	64.0%
d4-1,2-Dichlorobenzene	48.4%	54.8%
d5-Phenol	51.2%	53.6%
2-Fluorophenol	50.4%	49.9%
2,4,6-Tribromophenol	54.1%	43.5%
d4-2-Chlorophenol	58.4%	58.7%

Results reported in µg/L
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: LCS-083005
LCS/LCSD

Lab Sample ID: LCS-083005
LIMS ID: 05-15117
Matrix: Water
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted LCS/LCSD: 08/30/05

Date Analyzed LCS: 08/31/05 18:04
LCSD: 08/31/05 18:38
Instrument/Analyst LCS: NT6/LJR
LCSD: NT6/LJR
GPC Cleanup: NO

Sample Amount LCS: 500 mL
LCSD: 500 mL
Final Extract Volume LCS: 0.50 mL
LCSD: 0.50 mL
Dilution Factor LCS: 1.00
LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Phenol	19.6	25.0	78.4%	20.2	25.0	80.8%	3.0%
2-Chlorophenol	19.5	25.0	78.0%	19.8	25.0	79.2%	1.5%
1,4-Dichlorobenzene	10.6	25.0	42.4%	17.7	25.0	70.8%	50.2%
N-Nitroso-Di-N-Propylamine	20.6	25.0	82.4%	21.1	25.0	84.4%	2.4%
1,2,4-Trichlorobenzene	11.2	25.0	44.8%	17.5	25.0	70.0%	43.9%
4-Chloro-3-methylphenol	21.5	25.0	86.0%	21.9	25.0	87.6%	1.8%
Acenaphthene	17.6	25.0	70.4%	18.8	25.0	75.2%	6.6%
4-Nitrophenol	20.0	25.0	80.0%	19.8	25.0	79.2%	1.0%
2,4-Dinitrotoluene	21.3	25.0	85.2%	21.7	25.0	86.8%	1.9%
Pentachlorophenol	23.4	25.0	93.6%	23.1	25.0	92.4%	1.3%
Pyrene	19.9	25.0	79.6%	19.9	25.0	79.6%	0.0%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	78.8%	76.4%
2-Fluorobiphenyl	69.6%	71.2%
d14-p-Terphenyl	78.4%	75.6%
d4-1,2-Dichlorobenzene	63.2%	74.4%
d5-Phenol	76.8%	76.3%
2-Fluorophenol	69.3%	66.9%
2,4,6-Tribromophenol	81.3%	81.1%
d4-2-Chlorophenol	77.3%	76.8%

Results reported in µg/L
RPD calculated using sample concentrations per SW846.

METALS

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: A-2-M-2005
SAMPLE

Lab Sample ID: IK93L
LIMS ID: 05-14189
Matrix: Sediment
Data Release Authorized:
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Percent Total Solids: 77.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/26/05	6010B	08/30/05	7440-36-0	Antimony	6	6	U J
3050B	08/26/05	6010B	08/30/05	7440-38-2	Arsenic	6	6	U
3050B	08/26/05	6010B	08/30/05	7440-43-9	Cadmium	0.3	0.3	U
3050B	08/26/05	6010B	08/30/05	**7440-47-3**	**Chromium**	0.6	**28.4**	
3050B	08/26/05	6010B	08/30/05	**7440-50-8**	**Copper**	0.3	**17.8**	
3050B	08/26/05	6010B	08/30/05	**7439-92-1**	**Lead**	3	**6**	
CLP	08/26/05	7471A	08/26/05	7439-97-6	Mercury	0.06	0.06	U
3050B	08/26/05	6010B	08/30/05	**7440-02-0**	**Nickel**	1	**32**	
3050B	08/26/05	6010B	08/30/05	7440-22-4	Silver	0.4	0.4	U
3050B	08/26/05	6010B	08/30/05	**7440-66-6**	**Zinc**	0.8	**40.8**	

U-Analyte undetected at given RL
RL-Reporting Limit

EJB
9/13/05

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: AB-M-2005
SAMPLE

Lab Sample ID: IK93T
LIMS ID: 05-14197
Matrix: Sediment
Data Release Authorized:
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Percent Total Solids: 81.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/26/05	6010B	08/30/05	7440-36-0	Antimony	6	6	U J
3050B	08/26/05	6010B	08/30/05	7440-38-2	Arsenic	6	6	U
3050B	08/26/05	6010B	08/30/05	7440-43-9	Cadmium	0.2	0.2	U
3050B	08/26/05	6010B	08/30/05	**7440-47-3**	**Chromium**	0.6	**31.2**	
3050B	08/26/05	6010B	08/30/05	**7440-50-8**	**Copper**	0.2	**23.9**	
3050B	08/26/05	6010B	08/30/05	**7439-92-1**	**Lead**	2	**8**	
CLP	08/26/05	7471A	08/26/05	7439-97-6	Mercury	0.06	0.06	U
3050B	08/26/05	6010B	08/30/05	**7440-02-0**	**Nickel**	1	**34**	
3050B	08/26/05	6010B	08/30/05	7440-22-4	Silver	0.4	0.4	U
3050B	08/26/05	6010B	08/30/05	**7440-66-6**	**Zinc**	0.7	**45.1**	

U-Analyte undetected at given RL
RL-Reporting Limit

EJB
9/13/05

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: B-2-M-2005
SAMPLE

Lab Sample ID: IK93U
LIMS ID: 05-14198
Matrix: Sediment
Data Release Authorized:
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Percent Total Solids: 82.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/26/05	6010B	08/30/05	7440-36-0	Antimony	6	6	U J
3050B	08/26/05	6010B	08/30/05	7440-38-2	Arsenic	6	6	U
3050B	08/26/05	6010B	08/30/05	7440-43-9	Cadmium	0.2	0.2	U
3050B	08/26/05	6010B	08/30/05	**7440-47-3**	**Chromium**	0.6	**29.4**	
3050B	08/26/05	6010B	08/30/05	**7440-50-8**	**Copper**	0.2	**21.0**	
3050B	08/26/05	6010B	08/30/05	**7439-92-1**	**Lead**	2	**7**	
CLP	08/26/05	7471A	08/26/05	7439-97-6	Mercury	0.06	0.06	U
3050B	08/26/05	6010B	08/30/05	**7440-02-0**	**Nickel**	1	**33**	
3050B	08/26/05	6010B	08/30/05	7440-22-4	Silver	0.3	0.3	U
3050B	08/26/05	6010B	08/30/05	**7440-66-6**	**Zinc**	0.7	**44.8**	

U-Analyte undetected at given RL
RL-Reporting Limit

EJB
9/13/05

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: CD-M-2005
SAMPLE

Lab Sample ID: IK93S
LIMS ID: 05-14196
Matrix: Sediment
Data Release Authorized:
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Percent Total Solids: 81.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/26/05	6010B	08/30/05	7440-36-0	Antimony	6	6	U J
3050B	08/26/05	6010B	08/30/05	7440-38-2	Arsenic	6	6	U
3050B	08/26/05	6010B	08/30/05	7440-43-9	Cadmium	0.2	0.2	U
3050B	08/26/05	6010B	08/30/05	**7440-47-3**	**Chromium**	0.6	**28.9**	
3050B	08/26/05	6010B	08/30/05	**7440-50-8**	**Copper**	0.2	**25.4**	
3050B	08/26/05	6010B	08/30/05	**7439-92-1**	**Lead**	2	**9**	
CLP	08/26/05	7471A	08/26/05	**7439-97-6**	**Mercury**	0.06	**0.06**	
3050B	08/26/05	6010B	08/30/05	**7440-02-0**	**Nickel**	1	**32**	
3050B	08/26/05	6010B	08/30/05	7440-22-4	Silver	0.3	0.3	U
3050B	08/26/05	6010B	08/30/05	**7440-66-6**	**Zinc**	0.7	**45.4**	

U-Analyte undetected at given RL
RL-Reporting Limit

EJB
9/13/05

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: E-M-2005
SAMPLE

Lab Sample ID: IK93R
LIMS ID: 05-14195
Matrix: Sediment
Data Release Authorized:
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Percent Total Solids: 79.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/26/05	6010B	08/30/05	7440-36-0	Antimony	6	6	UJ
3050B	08/26/05	6010B	08/30/05	7440-38-2	Arsenic	6	6	U
3050B	08/26/05	6010B	08/30/05	7440-43-9	Cadmium	0.2	0.2	U
3050B	08/26/05	6010B	08/30/05	**7440-47-3**	**Chromium**	0.6	**28.4**	
3050B	08/26/05	6010B	08/30/05	**7440-50-8**	**Copper**	0.2	**28.2**	
3050B	08/26/05	6010B	08/30/05	**7439-92-1**	**Lead**	2	**14**	
CLP	08/26/05	7471A	08/26/05	**7439-97-6**	**Mercury**	0.05	**0.06**	
3050B	08/26/05	6010B	08/30/05	**7440-02-0**	**Nickel**	1	**31**	
3050B	08/26/05	6010B	08/30/05	7440-22-4	Silver	0.4	0.4	U
3050B	08/26/05	6010B	08/30/05	**7440-66-6**	**Zinc**	0.7	**50.3**	

U-Analyte undetected at given RL
RL-Reporting Limit

EJB
9/13/05

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: F-1-M-2005
SAMPLE

Lab Sample ID: IK93P
LIMS ID: 05-14193
Matrix: Sediment
Data Release Authorized:
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Percent Total Solids: 80.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/26/05	6010B	08/30/05	7440-36-0	Antimony	6	6	U J
3050B	08/26/05	6010B	08/30/05	7440-38-2	Arsenic	6	6	U
3050B	08/26/05	6010B	08/30/05	7440-43-9	Cadmium	0.2	0.2	U
3050B	08/26/05	6010B	08/30/05	**7440-47-3**	**Chromium**	0.6	**70.6**	
3050B	08/26/05	6010B	08/30/05	**7440-50-8**	**Copper**	0.2	**26.5**	
3050B	08/26/05	6010B	08/30/05	**7439-92-1**	**Lead**	2	**6**	
CLP	08/26/05	7471A	08/26/05	7439-97-6	Mercury	0.05	0.05	U
3050B	08/26/05	6010B	08/30/05	**7440-02-0**	**Nickel**	1	**33**	
3050B	08/26/05	6010B	08/30/05	7440-22-4	Silver	0.4	0.4	U
3050B	08/26/05	6010B	08/30/05	**7440-66-6**	**Zinc**	0.7	**46.3**	

U-Analyte undetected at given RL
RL-Reporting Limit

EJB
9/13/05

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: FD-1-M-2005
SAMPLE

Lab Sample ID: IK93Q
LIMS ID: 05-14194
Matrix: Sediment
Data Release Authorized
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Percent Total Solids: 81.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/26/05	6010B	08/30/05	7440-36-0	Antimony	6	6	U J
3050B	08/26/05	6010B	08/30/05	7440-38-2	Arsenic	6	6	U
3050B	08/26/05	6010B	08/30/05	7440-43-9	Cadmium	0.2	0.2	U
3050B	08/26/05	6010B	08/30/05	**7440-47-3**	**Chromium**	0.6	**25.3**	
3050B	08/26/05	6010B	08/30/05	**7440-50-8**	**Copper**	0.2	**25.0**	
3050B	08/26/05	6010B	08/30/05	**7439-92-1**	**Lead**	2	**7**	
CLP	08/26/05	7471A	08/26/05	7439-97-6	Mercury	0.06	0.06	U
3050B	08/26/05	6010B	08/30/05	**7440-02-0**	**Nickel**	1	**30**	
3050B	08/26/05	6010B	08/30/05	7440-22-4	Silver	0.4	0.4	U
3050B	08/26/05	6010B	08/30/05	**7440-66-6**	**Zinc**	0.7	**46.7**	

U-Analyte undetected at given RL
RL-Reporting Limit

EJB
9/13/05

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: F-2-M-2005
SAMPLE

Lab Sample ID: IK93O
LIMS ID: 05-14192
Matrix: Sediment
Data Release Authorized
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Percent Total Solids: 81.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/26/05	6010B	08/30/05	7440-36-0	Antimony	6	6	UJ
3050B	08/26/05	6010B	08/30/05	7440-38-2	Arsenic	6	6	U
3050B	08/26/05	6010B	08/30/05	7440-43-9	Cadmium	0.2	0.2	U
3050B	08/26/05	6010B	08/30/05	**7440-47-3**	**Chromium**	0.6	**29.7**	
3050B	08/26/05	6010B	08/30/05	**7440-50-8**	**Copper**	0.2	**17.8**	
3050B	08/26/05	6010B	08/30/05	**7439-92-1**	**Lead**	2	**6**	
CLP	08/26/05	7471A	08/26/05	7439-97-6	Mercury	0.05	0.05	U
3050B	08/26/05	6010B	08/30/05	**7440-02-0**	**Nickel**	1	**33**	
3050B	08/26/05	6010B	08/30/05	7440-22-4	Silver	0.3	0.3	U
3050B	08/26/05	6010B	08/30/05	**7440-66-6**	**Zinc**	0.7	**40.5**	

U-Analyte undetected at given RL
RL-Reporting Limit

EJB
9/13/05

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: G-M-2005
SAMPLE

Lab Sample ID: IK93K
LIMS ID: 05-14188
Matrix: Sediment
Data Release Authorized:
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Percent Total Solids: 80.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/26/05	6010B	08/30/05	7440-36-0	Antimony	6	6	U J
3050B	08/26/05	6010B	08/30/05	7440-38-2	Arsenic	6	6	U
3050B	08/26/05	6010B	08/30/05	7440-43-9	Cadmium	0.2	0.2	U
3050B	08/26/05	6010B	08/30/05	**7440-47-3**	**Chromium**	0.6	**29.2**	
3050B	08/26/05	6010B	08/30/05	**7440-50-8**	**Copper**	0.2	**19.5**	
3050B	08/26/05	6010B	08/30/05	**7439-92-1**	**Lead**	2	**7**	
CLP	08/26/05	7471A	08/26/05	**7439-97-6**	**Mercury**	0.05	**0.05**	
3050B	08/26/05	6010B	08/30/05	**7440-02-0**	**Nickel**	1	**31**	
3050B	08/26/05	6010B	08/30/05	7440-22-4	Silver	0.4	0.4	U
3050B	08/26/05	6010B	08/30/05	**7440-66-6**	**Zinc**	0.7	**40.4**	

U-Analyte undetected at given RL
RL-Reporting Limit

EJB
9/13/05

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: HI-M-2005
SAMPLE

Lab Sample ID: IK93J
LIMS ID: 05-14187
Matrix: Sediment
Data Release Authorized:
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Percent Total Solids: 78.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/26/05	6010B	08/30/05	7440-36-0	Antimony	6	6	UJ
3050B	08/26/05	6010B	08/30/05	7440-38-2	Arsenic	6	6	U
3050B	08/26/05	6010B	08/30/05	7440-43-9	Cadmium	0.3	0.3	U
3050B	08/26/05	6010B	08/30/05	**7440-47-3**	**Chromium**	0.6	**29.9**	
3050B	08/26/05	6010B	08/30/05	**7440-50-8**	**Copper**	0.3	**16.9**	
3050B	08/26/05	6010B	08/30/05	**7439-92-1**	**Lead**	3	**6**	
CLP	08/26/05	7471A	08/26/05	7439-97-6	Mercury	0.06	0.06	U
3050B	08/26/05	6010B	08/30/05	**7440-02-0**	**Nickel**	1	**33**	
3050B	08/26/05	6010B	08/30/05	7440-22-4	Silver	0.4	0.4	U
3050B	08/26/05	6010B	08/30/05	**7440-66-6**	**Zinc**	0.8	**39.0**	

U-Analyte undetected at given RL
RL-Reporting Limit

EJB
9/13/05

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: J-M-2005
SAMPLE

Lab Sample ID: IK93I
LIMS ID: 05-14186
Matrix: Sediment
Data Release Authorized:
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Percent Total Solids: 78.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/26/05	6010B	08/30/05	7440-36-0	Antimony	6	6	U J
3050B	08/26/05	6010B	08/30/05	7440-38-2	Arsenic	6	6	U
3050B	08/26/05	6010B	08/30/05	7440-43-9	Cadmium	0.3	0.3	U
3050B	08/26/05	6010B	08/30/05	**7440-47-3**	**Chromium**	0.6	**29.4**	
3050B	08/26/05	6010B	08/30/05	**7440-50-8**	**Copper**	0.3	**16.4**	
3050B	08/26/05	6010B	08/30/05	**7439-92-1**	**Lead**	3	**6**	
CLP	08/26/05	7471A	08/26/05	7439-97-6	Mercury	0.06	0.06	U
3050B	08/26/05	6010B	08/30/05	**7440-02-0**	**Nickel**	1	**33**	
3050B	08/26/05	6010B	08/30/05	7440-22-4	Silver	0.4	0.4	U
3050B	08/26/05	6010B	08/30/05	**7440-66-6**	**Zinc**	0.8	**39.3**	

U-Analyte undetected at given RL
RL-Reporting Limit

EJB
9/13/05

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: K-M-2005
SAMPLE

Lab Sample ID: IK93N
LIMS ID: 05-14191
Matrix: Sediment
Data Release Authorized:
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Percent Total Solids: 82.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/26/05	6010B	08/30/05	7440-36-0	Antimony	6	6	U
3050B	08/26/05	6010B	08/30/05	7440-38-2	Arsenic	6	6	U
3050B	08/26/05	6010B	08/30/05	7440-43-9	Cadmium	0.2	0.2	U
3050B	08/26/05	6010B	08/30/05	**7440-47-3**	**Chromium**	0.6	**28.7**	
3050B	08/26/05	6010B	08/30/05	**7440-50-8**	**Copper**	0.2	**18.7**	
3050B	08/26/05	6010B	08/30/05	**7439-92-1**	**Lead**	2	**7**	
CLP	08/26/05	7471A	08/26/05	7439-97-6	Mercury	0.05	0.05	U
3050B	08/26/05	6010B	08/30/05	**7440-02-0**	**Nickel**	1	**32**	
3050B	08/26/05	6010B	08/30/05	7440-22-4	Silver	0.3	0.3	U
3050B	08/26/05	6010B	08/30/05	**7440-66-6**	**Zinc**	0.7	**44.5**	

U-Analyte undetected at given RL
RL-Reporting Limit

EJB
9/13/05

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: L-M-2005
SAMPLE

Lab Sample ID: IK93H
LIMS ID: 05-14185
Matrix: Sediment
Data Release Authorized:
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Percent Total Solids: 80.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/26/05	6010B	08/30/05	7440-36-0	Antimony	6	6	U J
3050B	08/26/05	6010B	08/30/05	7440-38-2	Arsenic	6	6	U
3050B	08/26/05	6010B	08/30/05	7440-43-9	Cadmium	0.2	0.2	U
3050B	08/26/05	6010B	08/30/05	**7440-47-3**	**Chromium**	0.6	**27.8**	
3050B	08/26/05	6010B	08/30/05	**7440-50-8**	**Copper**	0.2	**21.0**	
3050B	08/26/05	6010B	08/30/05	**7439-92-1**	**Lead**	2	**7**	
CLP	08/26/05	7471A	08/26/05	**7439-97-6**	**Mercury**	0.05	**0.05**	
3050B	08/26/05	6010B	08/30/05	**7440-02-0**	**Nickel**	1	**30**	
3050B	08/26/05	6010B	08/30/05	7440-22-4	Silver	0.4	0.4	U
3050B	08/26/05	6010B	08/30/05	**7440-66-6**	**Zinc**	0.7	**46.5**	

U-Analyte undetected at given RL
RL-Reporting Limit

FORM-I

EJB
9/13/05

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: M-M-2005
SAMPLE

Lab Sample ID: IK93F
LIMS ID: 05-14183
Matrix: Sediment
Data Release Authorized:
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Percent Total Solids: 83.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/26/05	6010B	08/30/05	7440-36-0	Antimony	6	6	U J
3050B	08/26/05	6010B	08/30/05	7440-38-2	Arsenic	6	6	U
3050B	08/26/05	6010B	08/30/05	7440-43-9	Cadmium	0.2	0.2	U
3050B	08/26/05	6010B	08/30/05	**7440-47-3**	**Chromium**	0.6	**46.8**	
3050B	08/26/05	6010B	08/30/05	**7440-50-8**	**Copper**	0.2	**21.7**	
3050B	08/26/05	6010B	08/30/05	**7439-92-1**	**Lead**	2	**6**	
CLP	08/26/05	7471A	08/26/05	7439-97-6	Mercury	0.06	0.06	U
3050B	08/26/05	6010B	08/30/05	**7440-02-0**	**Nickel**	1	**46**	
3050B	08/26/05	6010B	08/30/05	7440-22-4	Silver	0.3	0.3	U
3050B	08/26/05	6010B	08/30/05	**7440-66-6**	**Zinc**	0.7	**42.6**	

U-Analyte undetected at given RL
RL-Reporting Limit

EJB
9/13/05

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: MD-M-2005
SAMPLE

Lab Sample ID: IK93G
LIMS ID: 05-14184
Matrix: Sediment
Data Release Authorized:
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Percent Total Solids: 82.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/26/05	6010B	08/30/05	7440-36-0	Antimony	6	6	U J
3050B	08/26/05	6010B	08/30/05	7440-38-2	Arsenic	6	6	U
3050B	08/26/05	6010B	08/30/05	7440-43-9	Cadmium	0.2	0.2	U
3050B	08/26/05	6010B	08/30/05	**7440-47-3**	**Chromium**	0.6	**34.1**	
3050B	08/26/05	6010B	08/30/05	**7440-50-8**	**Copper**	0.2	**20.3**	
3050B	08/26/05	6010B	08/30/05	**7439-92-1**	**Lead**	2	**6**	
CLP	08/26/05	7471A	08/26/05	7439-97-6	Mercury	0.05	0.05	U
3050B	08/26/05	6010B	08/30/05	**7440-02-0**	**Nickel**	1	**36**	
3050B	08/26/05	6010B	08/30/05	7440-22-4	Silver	0.4	0.4	U
3050B	08/26/05	6010B	08/30/05	**7440-66-6**	**Zinc**	0.7	**41.2**	

U-Analyte undetected at given RL
RL-Reporting Limit

EJB
9/13/05

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: N-M-2005
SAMPLE

Lab Sample ID: IK93M
LIMS ID: 05-14190
Matrix: Sediment
Data Release Authorized:
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Percent Total Solids: 78.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/26/05	6010B	08/30/05	7440-36-0	Antimony	6	6	U
3050B	08/26/05	6010B	08/30/05	7440-38-2	Arsenic	6	6	U
3050B	08/26/05	6010B	08/30/05	7440-43-9	Cadmium	0.2	0.2	U
3050B	08/26/05	6010B	08/30/05	**7440-47-3**	**Chromium**	0.6	**23.7**	
3050B	08/26/05	6010B	08/30/05	**7440-50-8**	**Copper**	0.2	**21.2**	
3050B	08/26/05	6010B	08/30/05	**7439-92-1**	**Lead**	2	**5**	
CLP	08/26/05	7471A	08/26/05	7439-97-6	Mercury	0.06	0.06	U
3050B	08/26/05	6010B	08/30/05	**7440-02-0**	**Nickel**	1	**26**	
3050B	08/26/05	6010B	08/30/05	7440-22-4	Silver	0.4	0.4	U
3050B	08/26/05	6010B	08/30/05	**7440-66-6**	**Zinc**	0.7	**41.9**	

U-Analyte undetected at given RL
RL-Reporting Limit

EJB
9/13/05

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: O-M-2005
SAMPLE

Lab Sample ID: IK93E
LIMS ID: 05-14182
Matrix: Sediment
Data Release Authorized:
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Percent Total Solids: 82.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/26/05	6010B	08/30/05	7440-36-0	Antimony	6	6	U J
3050B	08/26/05	6010B	08/30/05	7440-38-2	Arsenic	6	6	U
3050B	08/26/05	6010B	08/30/05	7440-43-9	Cadmium	0.2	0.2	U
3050B	08/26/05	6010B	08/30/05	**7440-47-3**	**Chromium**	0.6	**25.8**	
3050B	08/26/05	6010B	08/30/05	**7440-50-8**	**Copper**	0.2	**26.9**	
3050B	08/26/05	6010B	08/30/05	**7439-92-1**	**Lead**	2	**4**	
CLP	08/26/05	7471A	08/26/05	**7439-97-6**	**Mercury**	0.05	**0.06**	
3050B	08/26/05	6010B	08/30/05	**7440-02-0**	**Nickel**	1	**29**	
3050B	08/26/05	6010B	08/30/05	7440-22-4	Silver	0.3	0.3	U
3050B	08/26/05	6010B	08/30/05	**7440-66-6**	**Zinc**	0.7	**42.0**	

U-Analyte undetected at given RL
RL-Reporting Limit

EJB
9/13/05

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: P-M-2005
SAMPLE

Lab Sample ID: IK93D
LIMS ID: 05-14181
Matrix: Sediment
Data Release Authorized
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Percent Total Solids: 82.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/26/05	6010B	08/30/05	7440-36-0	Antimony	6	6	U J
3050B	08/26/05	6010B	08/30/05	7440-38-2	Arsenic	6	6	U
3050B	08/26/05	6010B	08/30/05	7440-43-9	Cadmium	0.2	0.2	U
3050B	08/26/05	6010B	08/30/05	**7440-47-3**	**Chromium**	0.6	**24.1**	
3050B	08/26/05	6010B	08/30/05	**7440-50-8**	**Copper**	0.2	**26.4**	
3050B	08/26/05	6010B	08/30/05	**7439-92-1**	**Lead**	2	**6**	
CLP	08/26/05	7471A	08/26/05	**7439-97-6**	**Mercury**	0.05	**0.06**	
3050B	08/26/05	6010B	08/30/05	**7440-02-0**	**Nickel**	1	**26**	
3050B	08/26/05	6010B	08/30/05	7440-22-4	Silver	0.4	0.4	U
3050B	08/26/05	6010B	08/30/05	**7440-66-6**	**Zinc**	0.7	**45.0**	

U-Analyte undetected at given RL
RL-Reporting Limit

EJB
9/13/05

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: Q-M-2005
SAMPLE

Lab Sample ID: IK93B
LIMS ID: 05-14179
Matrix: Sediment
Data Release Authorized:
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Percent Total Solids: 82.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/26/05	6010B	08/30/05	7440-36-0	Antimony	6	6	U J
3050B	08/26/05	6010B	08/30/05	7440-38-2	Arsenic	6	6	U
3050B	08/26/05	6010B	08/30/05	7440-43-9	Cadmium	0.2	0.2	U
3050B	08/26/05	6010B	08/30/05	7440-47-3	Chromium	0.6	22.0	
3050B	08/26/05	6010B	08/30/05	7440-50-8	Copper	0.2	23.6	
3050B	08/26/05	6010B	08/30/05	7439-92-1	Lead	2	5	
CLP	08/26/05	7471A	08/26/05	7439-97-6	Mercury	0.04	0.05	
3050B	08/26/05	6010B	08/30/05	7440-02-0	Nickel	1	26	
3050B	08/26/05	6010B	08/30/05	7440-22-4	Silver	0.4	0.4	U
3050B	08/26/05	6010B	08/30/05	7440-66-6	Zinc	0.7	43.4	

U-Analyte undetected at given RL
RL-Reporting Limit

EJB
9/13/05

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: R-M-2005
SAMPLE

Lab Sample ID: IK93C
LIMS ID: 05-14180
Matrix: Sediment
Data Release Authorized:
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Percent Total Solids: 78.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/26/05	6010B	08/30/05	7440-36-0	Antimony	6	6	UJ
3050B	08/26/05	6010B	08/30/05	7440-38-2	Arsenic	6	6	U
3050B	08/26/05	6010B	08/30/05	7440-43-9	Cadmium	0.3	0.3	U
3050B	08/26/05	6010B	08/30/05	7440-47-3	Chromium	0.6	22.2	
3050B	08/26/05	6010B	08/30/05	7440-50-8	Copper	0.3	27.7	
3050B	08/26/05	6010B	08/30/05	7439-92-1	Lead	3	7	
CLP	08/26/05	7471A	08/26/05	7439-97-6	Mercury	0.06	0.07	
3050B	08/26/05	6010B	08/30/05	7440-02-0	Nickel	1	27	
3050B	08/26/05	6010B	08/30/05	7440-22-4	Silver	0.4	0.4	U
3050B	08/26/05	6010B	08/30/05	7440-66-6	Zinc	0.8	45.9	

U-Analyte undetected at given RL
RL-Reporting Limit

EJB
9/13/05

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: S-M-2005
SAMPLE

Lab Sample ID: IK93A
LIMS ID: 05-14178
Matrix: Sediment
Data Release Authorized:
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Percent Total Solids: 79.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/26/05	6010B	08/30/05	7440-36-0	Antimony	6	6	U J
3050B	08/26/05	6010B	08/30/05	7440-38-2	Arsenic	6	6	U
3050B	08/26/05	6010B	08/30/05	7440-43-9	Cadmium	0.2	0.2	U
3050B	08/26/05	6010B	08/30/05	**7440-47-3**	**Chromium**	0.6	**24.1**	
3050B	08/26/05	6010B	08/30/05	**7440-50-8**	**Copper**	0.2	**24.4**	
3050B	08/26/05	6010B	08/30/05	**7439-92-1**	**Lead**	2	**6**	
CLP	08/26/05	7471A	08/26/05	**7439-97-6**	**Mercury**	0.06	**0.06**	
3050B	08/26/05	6010B	08/30/05	**7440-02-0**	**Nickel**	1	**27**	
3050B	08/26/05	6010B	08/30/05	7440-22-4	Silver	0.4	0.4	U
3050B	08/26/05	6010B	08/30/05	**7440-66-6**	**Zinc**	0.7	**44.4**	

U-Analyte undetected at given RL
RL-Reporting Limit

FORM-I

EJB
9/13/05

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: METHOD BLANK

Lab Sample ID: IK93MB
LIMS ID: 05-14178
Matrix: Sediment
Data Release Authorized:
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/26/05	6010B	08/30/05	7440-36-0	Antimony	5	5	U
3050B	08/26/05	6010B	08/30/05	7440-38-2	Arsenic	5	5	U
3050B	08/26/05	6010B	08/30/05	7440-43-9	Cadmium	0.2	0.2	U
3050B	08/26/05	6010B	08/30/05	7440-47-3	Chromium	0.5	0.5	U
3050B	08/26/05	6010B	08/30/05	7440-50-8	Copper	0.2	0.2	U
3050B	08/26/05	6010B	08/30/05	7439-92-1	Lead	2	2	U
CLP	08/26/05	7471A	08/26/05	7439-97-6	Mercury	0.05	0.05	U
3050B	08/26/05	6010B	08/30/05	7440-02-0	Nickel	1	1	U
3050B	08/26/05	6010B	08/30/05	7440-22-4	Silver	0.3	0.3	U
3050B	08/26/05	6010B	08/30/05	**7440-66-6**	**Zinc**	0.6	**1.1**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: METHOD BLANK

Lab Sample ID: IK93MB
LIMS ID: 05-14198
Matrix: Sediment
Data Release Authorized:
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/26/05	6010B	08/30/05	7440-36-0	Antimony	5	5	U
3050B	08/26/05	6010B	08/30/05	7440-38-2	Arsenic	5	5	U
3050B	08/26/05	6010B	08/30/05	7440-43-9	Cadmium	0.2	0.2	U
3050B	08/26/05	6010B	08/30/05	7440-47-3	Chromium	0.5	0.5	U
3050B	08/26/05	6010B	08/30/05	7440-50-8	Copper	0.2	0.2	U
3050B	08/26/05	6010B	08/30/05	7439-92-1	Lead	2	2	U
CLP	08/26/05	7471A	08/26/05	7439-97-6	Mercury	0.05	0.05	U
3050B	08/26/05	6010B	08/30/05	7440-02-0	Nickel	1	1	U
3050B	08/26/05	6010B	08/30/05	7440-22-4	Silver	0.3	0.3	U
3050B	08/26/05	6010B	08/30/05	7440-66-6	Zinc	0.6	0.6	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: B-2-M-2005
MATRIX SPIKE

Lab Sample ID: IK93U
LIMS ID: 05-14198
Matrix: Sediment
Data Release Authorized:
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Antimony	6010B	6 U	54	232	23.3%	N
Arsenic	6010B	6 U	229	232	98.7%	
Cadmium	6010B	0.2 U	57.5	58.0	99.1%	
Chromium	6010B	29.4	89.4	58.0	103%	
Copper	6010B	21.0	81.1	58.0	104%	
Lead	6010B	7	234	232	97.8%	
Mercury	7471A	0.06 U	0.66	0.566	117%	
Nickel	6010B	33	89	58.0	96.6%	
Silver	6010B	0.3 U	57.2	58.0	98.6%	
Zinc	6010B	44.8	101	58.0	96.9%	

Reported in mg/kg-dry

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: S-M-2005
MATRIX SPIKE

Lab Sample ID: IK93A
LIMS ID: 05-14178
Matrix: Sediment
Data Release Authorized:
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Antimony	6010B	6 U	63	241	26.1%	N
Arsenic	6010B	6 U	243	241	101%	
Cadmium	6010B	0.2 U	60.9	60.1	101%	
Chromium	6010B	24.1	85.2	60.1	102%	
Copper	6010B	24.4	86.9	60.1	104%	
Lead	6010B	6	246	241	99.6%	
Mercury	7471A	0.06	0.64	0.544	107%	
Nickel	6010B	27	85	60.1	96.5%	
Silver	6010B	0.4 U	60.5	60.1	101%	
Zinc	6010B	44.4	105	60.1	101%	

Reported in mg/kg-dry

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: B-2-M-2005
DUPLICATE

Lab Sample ID: IK93U
LIMS ID: 05-14198
Matrix: Sediment
Data Release Authorized:
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	6010B	6 U	6 U	0.0%	+/- 6	L
Arsenic	6010B	6 U	6 U	0.0%	+/- 6	L
Cadmium	6010B	0.2 U	0.2 U	0.0%	+/- 0.2	L
Chromium	6010B	29.4	30.2	2.7%	+/- 20%	
Copper	6010B	21.0	20.1	4.4%	+/- 20%	
Lead	6010B	7	7	0.0%	+/- 2	L
Mercury	7471A	0.06 U	0.06 U	0.0%	+/- 0.06	L
Nickel	6010B	33	33	0.0%	+/- 20%	
Silver	6010B	0.3 U	0.4 U	0.0%	+/- 0.3	L
Zinc	6010B	44.8	41.6	7.4%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: S-M-2005
DUPLICATE

Lab Sample ID: IK93A
LIMS ID: 05-14178
Matrix: Sediment
Data Release Authorized:
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	6010B	6 U	6 U	0.0%	+/- 6	L
Arsenic	6010B	6 U	6 U	0.0%	+/- 6	L
Cadmium	6010B	0.2 U	0.2 U	0.0%	+/- 0.2	L
Chromium	6010B	24.1	22.0	9.1%	+/- 20%	
Copper	6010B	24.4	23.7	2.9%	+/- 20%	
Lead	6010B	6	6	0.0%	+/- 2	L
Mercury	7471A	0.06	0.06 U	0.0%	+/- 0.06	L
Nickel	6010B	27	26	3.8%	+/- 20%	
Silver	6010B	0.4 U	0.4 U	0.0%	+/- 0.4	L
Zinc	6010B	44.4	44.6	0.4%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: STD REFERENCE
ERA D044540

Lab Sample ID: IK93SRM
LIMS ID: 05-14178
Matrix: Sediment
Data Release Authorized:
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Analyte	Analysis Method	Analysis Date	mg/kg-dry	Certified Value	Advisory Range
Antimony	6010B	08/30/05	50	79	5-162
Arsenic	6010B	08/30/05	100	96	76-115
Cadmium	6010B	08/30/05	57.0	54.6	44.5-64.7
Chromium	6010B	08/30/05	71.9	68.8	54.0-83.6
Copper	6010B	08/30/05	95.3	83.8	69.0-98.6
Lead	6010B	08/30/05	125	121	98-145
Mercury	7471A	08/26/05	4.99	5.82	3.96-7.68
Nickel	6010B	08/30/05	55.5	54.5	44.4-64.6
Silver	6010B	08/30/05	109	106	64.9-147
Zinc	6010B	08/30/05	261	243	193-293

*Lower advisory range for antimony is the calculated detection limit.

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: STD REFERENCE
ERA D044540

Lab Sample ID: IK93SRM
LIMS ID: 05-14198
Matrix: Sediment
Data Release Authorized:
Reported: 08/31/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Analyte	Analysis Method	Analysis Date	mg/kg-dry	Certified Value	Advisory Range
Antimony	6010B	08/30/05	48	79	5-162
Arsenic	6010B	08/30/05	99	96	76-115
Cadmium	6010B	08/30/05	56.1	54.6	44.5-64.7
Chromium	6010B	08/30/05	71.4	68.8	54.0-83.6
Copper	6010B	08/30/05	90.3	83.8	69.0-98.6
Lead	6010B	08/30/05	123	121	98-145
Mercury	7471A	08/26/05	4.77	5.82	3.96-7.68
Nickel	6010B	08/30/05	55.1	54.5	44.4-64.6
Silver	6010B	08/30/05	108	106	64.9-147
Zinc	6010B	08/30/05	260	243	193-293

*Lower advisory range for antimony is the calculated detection limit.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS

Sample ID: A-2-M-2005
SAMPLE

Lab Sample ID: IK93L
LIMS ID: 05-14189
Matrix: Sediment
Data Release Authorized:
Reported: 09/07/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/26/05
Date Analyzed: 08/31/05 00:37
Instrument/Analyst: NT6/LJR
GPC Cleanup: No

Sample Amount: 26.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 19.8%
pH: 6.1

CAS Number	Analyte	RL	Result
108-95-2	Phenol	19	< 19 U
111-44-4	Bis-(2-Chloroethyl) Ether	19	< 19 U
95-57-8	2-Chlorophenol	19	< 19 U
541-73-1	1,3-Dichlorobenzene	19	< 19 U
106-46-7	1,4-Dichlorobenzene	19	< 19 U
100-51-6	Benzyl Alcohol	19	< 19 U
95-50-1	1,2-Dichlorobenzene	19	< 19 U
95-48-7	2-Methylphenol	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19	< 19 U
106-44-5	4-Methylphenol	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	96	< 96 U
67-72-1	Hexachloroethane	19	< 19 U
98-95-3	Nitrobenzene	19	< 19 U
78-59-1	Isophorone	19	< 19 U
88-75-5	2-Nitrophenol	96	< 96 U
105-67-9	2,4-Dimethylphenol	19	< 19 U
65-85-0	Benzoic Acid	190	< 190 U
111-91-1	bis(2-Chloroethoxy) Methane	19	< 19 U
120-83-2	2,4-Dichlorophenol	96	< 96 U
120-82-1	1,2,4-Trichlorobenzene	19	< 19 U
91-20-3	Naphthalene	19	< 19 U
106-47-8	4-Chloroaniline	96	< 96 U
87-68-3	Hexachlorobutadiene	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	96	< 96 U
91-57-6	2-Methylnaphthalene	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	96	< 96 U
88-06-2	2,4,6-Trichlorophenol	96	< 96 U
95-95-4	2,4,5-Trichlorophenol	96	< 96 U
91-58-7	2-Chloronaphthalene	19	< 19 U
88-74-4	2-Nitroaniline	96	< 96 U
131-11-3	Dimethylphthalate	19	< 19 U
208-96-8	Acenaphthylene	19	< 19 U
99-09-2	3-Nitroaniline	96	< 96 U
83-32-9	Acenaphthene	19	< 19 U
51-28-5	2,4-Dinitrophenol	190	< 190 U
100-02-7	4-Nitrophenol	96	< 96 U
132-64-9	Dibenzofuran	19	< 19 U
606-20-2	2,6-Dinitrotoluene	96	< 96 U

POLYCHLORINATED BIPHENYLS

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: AB-M-2005
SAMPLE

Lab Sample ID: IK93T
LIMS ID: 05-14197
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 09/01/05 03:15
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 26.2 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: 6.8
Percent Moisture: 17.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	Aroclor 1260	19	< 19 U
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	71.0%
Tetrachlorometaxylene	66.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: B-2-M-2005
SAMPLE

Lab Sample ID: IK93U
LIMS ID: 05-14198
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 09/01/05 04:23
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 26.0 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: 6.8
Percent Moisture: 14.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	29	< 29 Y
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	Aroclor 1260	19	< 19 U
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	81.5%
Tetrachlorometaxylene	76.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: CD-M-2005
SAMPLE

Lab Sample ID: IK93S
LIMS ID: 05-14196
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 09/01/05 02:58
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: 6.4
Percent Moisture: 21.0%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	Aroclor 1254	20	< 20 U
11096-82-5	Aroclor 1260	20	< 20 U
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	74.8%
Tetrachlorometaxylene	70.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: E-M-2005
SAMPLE

Lab Sample ID: IK93R
LIMS ID: 05-14195
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 09/01/05 02:41
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: 6.7
Percent Moisture: 19.3%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	Aroclor 1254	20	< 20 U
11096-82-5	Aroclor 1260	20	< 20 U
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	78.8%
Tetrachlorometaxylene	71.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: F-1-M-2005
SAMPLE

Lab Sample ID: IK93P
LIMS ID: 05-14193
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 09/01/05 02:07
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: 6.6
Percent Moisture: 15.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	Aroclor 1254	20	< 20 U
11096-82-5	Aroclor 1260	20	< 20 U
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	71.0%
Tetrachlorometaxylene	65.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: FD-1-M-2005
SAMPLE

Lab Sample ID: IK93Q
LIMS ID: 05-14194
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 09/01/05 02:24
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: 6.8
Percent Moisture: 16.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	Aroclor 1254	20	< 20 U
11096-82-5	Aroclor 1260	20	< 20 U
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	77.5%
Tetrachlorometaxylene	71.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: F-2-M-2005
SAMPLE

Lab Sample ID: IK930
LIMS ID: 05-14192
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 09/01/05 01:50
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 26.0 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: 6.7
Percent Moisture: 17.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	Aroclor 1260	19	< 19 U
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U

Reported in μg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	63.2%
Tetrachlorometaxylene	53.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: G-M-2005
SAMPLE

Lab Sample ID: IK93K
LIMS ID: 05-14188
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 09/01/05 00:08
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 26.3 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: 6.7
Percent Moisture: 16.8%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	Aroclor 1260	19	< 19 U
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	76.0%
Tetrachlorometaxylene	72.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: HI-M-2005
SAMPLE

Lab Sample ID: IK93J
LIMS ID: 05-14187
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 23:51
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: 6.4
Percent Moisture: 19.0%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	Aroclor 1254	20	< 20 U
11096-82-5	Aroclor 1260	20	< 20 U
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U

Reported in μg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	73.0%
Tetrachlorometaxylene	69.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: J-M-2005
SAMPLE

Lab Sample ID: IK93I
LIMS ID: 05-14186
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 23:34
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 26.2 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: 6.5
Percent Moisture: 18.0%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	Aroclor 1260	19	< 19 U
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	71.5%
Tetrachlorometaxylene	66.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: K-M-2005
SAMPLE

Lab Sample ID: IK93N
LIMS ID: 05-14191
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 09/01/05 00:59
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: 6.6
Percent Moisture: 15.8%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	Aroclor 1254	20	< 20 U
11096-82-5	Aroclor 1260	20	< 20 U
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	76.5%
Tetrachlorometaxylene	72.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: L-M-2005
SAMPLE

Lab Sample ID: IK93H
LIMS ID: 05-14185
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 23:17
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: 6.5
Percent Moisture: 18.0%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	Aroclor 1260	19	< 19 U
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	78.5%
Tetrachlorometaxylene	73.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: M-M-2005
SAMPLE

Lab Sample ID: IK93F
LIMS ID: 05-14183
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1 7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 22:43
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: 6.3
Percent Moisture: 16.1%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	Aroclor 1254	20	< 20 U
11096-82-5	Aroclor 1260	20	< 20 U
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	73.5%
Tetrachlorometaxylene	69.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: MD-M-2005
SAMPLE

Lab Sample ID: IK93G
LIMS ID: 05-14184
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 23:00
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: 6.3
Percent Moisture: 18.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	Aroclor 1254	20	< 20 U
11096-82-5	Aroclor 1260	20	< 20 U
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	72.0%
Tetrachlorometaxylene	68.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: N-M-2005
SAMPLE

Lab Sample ID: IK93M
LIMS ID: 05-14190
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 09/01/05 00:42
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: 6.8
Percent Moisture: 19.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 20 U
53469-21-9	Aroclor 1242	19	< 20 U
12672-29-6	Aroclor 1248	19	< 20 U
11097-69-1	Aroclor 1254	19	< 20 U
11096-82-5	Aroclor 1260	19	< 20 U
11104-28-2	Aroclor 1221	19	< 20 U
11141-16-5	Aroclor 1232	19	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	75.0%
Tetrachlorometaxylene	72.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: O-M-2005
SAMPLE

Lab Sample ID: IK93E
LIMS ID: 05-14182
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 22:27
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: 7.0
Percent Moisture: 16.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	Aroclor 1260	19	< 19 U
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	79.2%
Tetrachlorometaxylene	73.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: P-M-2005
SAMPLE

Lab Sample ID: IK93D
LIMS ID: 05-14181
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 22:10
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 26.2 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: 7.1
Percent Moisture: 17.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	Aroclor 1260	19	< 19 U
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	74.2%
Tetrachlorometaxylene	71.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: Q-M-2005
SAMPLE

Lab Sample ID: IK93B
LIMS ID: 05-14179
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 21:36
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: 7.1
Percent Moisture: 15.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	Aroclor 1254	20	< 20 U
11096-82-5	Aroclor 1260	20	< 20 U
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	75.5%
Tetrachlorometaxylene	73.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: R-M-2005
SAMPLE

Lab Sample ID: IK93C
LIMS ID: 05-14180
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 21:53
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: 6.9
Percent Moisture: 20.5%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	Aroclor 1260	19	< 19 U
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	71.5%
Tetrachlorometaxylene	66.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: S-M-2005
SAMPLE

Lab Sample ID: IK93A
LIMS ID: 05-14178
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 21:19
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 26.3 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: 6.9
Percent Moisture: 19.5%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	Aroclor 1260	19	< 19 U
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	75.5%
Tetrachlorometaxylene	73.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: K-M-2005
MATRIX SPIKE

Lab Sample ID: IK93N
LIMS ID: 05-14191
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 09/01/05 01:16
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: 6.6
Percent Moisture: 15.8%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	---
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	Aroclor 1254	20	< 20 U
11096-82-5	Aroclor 1260	20	---
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	69.8%
Tetrachlorometaxylene	68.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: K-M-2005
MATRIX SPIKE DUP

Lab Sample ID: IK93N
LIMS ID: 05-14191
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 09/01/05 01:33
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: 6.6
Percent Moisture: 15.8%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	---
53469-21-9	Aroclor 1242	19	< 20 U
12672-29-6	Aroclor 1248	19	< 20 U
11097-69-1	Aroclor 1254	19	< 20 U
11096-82-5	Aroclor 1260	19	---
11104-28-2	Aroclor 1221	19	< 20 U
11141-16-5	Aroclor 1232	19	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	72.5%
Tetrachlorometaxylene	68.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: MB-082505
METHOD BLANK

Lab Sample ID: MB-082505
LIMS ID: 05-14191
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1 7946-02
Date Sampled: NA
Date Received: NA

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 20:28
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.0 g
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: NA
Percent Moisture: NA

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	Aroclor 1254	20	< 20 U
11096-82-5	Aroclor 1260	20	< 20 U
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	72.5%
Tetrachlorometaxylene	69.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: MB-082505
METHOD BLANK

Lab Sample ID: MB-082505
LIMS ID: 05-14198
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Date Extracted: 08/25/05
Date Analyzed: 09/01/05 03:32
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.0 g
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: NA
Percent Moisture: NA

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	20	< 20 U
11097-69-1	Aroclor 1254	20	< 20 U
11096-82-5	Aroclor 1260	20	< 20 U
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	81.5%
Tetrachlorometaxylene	77.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: SRM SQ-1
STANDARD REFERENCE

Lab Sample ID: SRM SQ-1
LIMS ID: 05-14191
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 21:02
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 15.0 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: NA
Percent Moisture: 40.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	33	< 33 U
53469-21-9	Aroclor 1242	33	< 33 U
12672-29-6	Aroclor 1248	33	< 33 U
11097-69-1	**Aroclor 1254**	**33**	**130**
11096-82-5	Aroclor 1260	33	< 33 U
11104-28-2	Aroclor 1221	33	< 33 U
11141-16-5	Aroclor 1232	33	< 33 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	68.2%
Tetrachlorometaxylene	69.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: SRM SQ-1
STANDARD REFERENCE

Lab Sample ID: SRM SQ-1
LIMS ID: 05-14198
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Date Extracted: 08/25/05
Date Analyzed: 09/01/05 04:06
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 15.0 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: NA
Percent Moisture: 40.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	33	< 33 U
53469-21-9	Aroclor 1242	33	< 33 U
12672-29-6	Aroclor 1248	33	< 33 U
11097-69-1	**Aroclor 1254**	**33**	**150**
11096-82-5	Aroclor 1260	33	< 33 U
11104-28-2	Aroclor 1221	33	< 33 U
11141-16-5	Aroclor 1232	33	< 33 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	76.2%
Tetrachlorometaxylene	74.8%

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB SOIL/SEDIMENTS SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

Client ID	DCBP	TCMX	TOT OUT
S-M-2005	75.5%	73.8%	0
Q-M-2005	75.5%	73.8%	0
R-M-2005	71.5%	66.8%	0
P-M-2005	74.2%	71.2%	0
O-M-2005	79.2%	73.8%	0
M-M-2005	73.5%	69.0%	0
MD-M-2005	72.0%	68.0%	0
L-M-2005	78.5%	73.5%	0
J-M-2005	71.5%	66.2%	0
HI-M-2005	73.0%	69.8%	0
G-M-2005	76.0%	72.0%	0
A-2-M-2005	68.8%	65.5%	0
N-M-2005	75.0%	72.0%	0
MB-082505	72.5%	69.0%	0
LCS-082505	72.0%	68.5%	0
SRM SQ-1	68.2%	69.5%	0
K-M-2005	76.5%	72.2%	0
K-M-2005 MS	69.8%	68.2%	0
K-M-2005 MSD	72.5%	68.0%	0
F-2-M-2005	63.2%	53.8%	0
F-1-M-2005	71.0%	65.8%	0
FD-1-M-2005	77.5%	71.5%	0
E-M-2005	78.8%	71.0%	0
CD-M-2005	74.8%	70.0%	0
AB-M-2005	71.0%	66.2%	0
MB-082505	81.5%	77.0%	0
LCS-082505	80.2%	74.5%	0
SRM SQ-1	76.2%	74.8%	0
B-2-M-2005	81.5%	76.8%	0

	LCS/MB LIMITS	QC LIMITS
(DCBP) = Decachlorobiphenyl	(49-140)	(30-164)
(TCMX) = Tetrachlorometaxylene	(30-135)	(26-143)

Prep Method: SW3550B
Log Number Range: 05-14178 to 05-14198

FORM-II SW8082

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: K-M-2005
MS/MSD

Lab Sample ID: IK93N
LIMS ID: 05-14191
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted MS/MSD: 08/25/05

Date Analyzed MS: 09/01/05 01:16
MSD: 09/01/05 01:33
Instrument/Analyst MS: ECD5/PK
MSD: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount MS: 25.4 g-dry-wt
MSD: 25.7 g-dry-wt
Final Extract Volume MS: 5.0 mL
MSD: 5.0 mL
Dilution Factor MS: 1.00
MSD: 1.00
Silica Gel: No
pH: 6.6
Percent Moisture: 15.8%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Aroclor 1016	< 19.7 U	64.4	101	63.8%	63.8	99.6	64.1%	0.9%
Aroclor 1260	< 19.7 U	71.7	101	71.0%	75.4	99.6	75.7%	5.0%

Results reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: LCS-082505
LAB CONTROL

Lab Sample ID: LCS-082505
LIMS ID: 05-14191
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 20:45
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.0 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: NA
Percent Moisture: NA

Analyte	Lab Control	Spike Added	Recovery
Aroclor 1016	78.6	102	77.1%
Aroclor 1260	79.4	102	77.8%

PCB Surrogate Recovery

Decachlorobiphenyl	72.0%
Tetrachlorometaxylene	68.5%

Results reported in µg/kg (ppb)

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: LCS-082505
LAB CONTROL

Lab Sample ID: LCS-082505
LIMS ID: 05-14198
Matrix: Sediment
Data Release Authorized: V TS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Date Extracted: 08/25/05
Date Analyzed: 09/01/05 03:49
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.0 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: NA
Percent Moisture: NA

Analyte	Lab Control	Spike Added	Recovery
Aroclor 1016	85.9	102	84.2%
Aroclor 1260	84.6	102	82.9%

PCB Surrogate Recovery

Decachlorobiphenyl	80.2%
Tetrachlorometaxylene	74.5%

Results reported in µg/kg (ppb)

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: RINSEATE BLANK SAMPLE

Lab Sample ID: IK93V
LIMS ID: 05-14199
Matrix: Water
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1 7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/23/05
Date Analyzed: 08/26/05 00:10
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: No

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
Acid Cleanup: No

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.0	< 1.0 U
53469-21-9	Aroclor 1242	1.0	< 1.0 U
12672-29-6	Aroclor 1248	1.0	< 1.0 U
11097-69-1	Aroclor 1254	1.0	< 1.0 U
11096-82-5	Aroclor 1260	1.0	< 1.0 U
11104-28-2	Aroclor 1221	1.0	< 1.0 U
11141-16-5	Aroclor 1232	1.0	< 1.0 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	49.2%
Tetrachlorometaxylene	71.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: MB-082305
METHOD BLANK

Lab Sample ID: MB-082305
LIMS ID: 05-14199
Matrix: Water
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Date Extracted: 08/23/05
Date Analyzed: 08/25/05 22:45
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: No

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
Acid Cleanup: No

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.0	< 1.0 U
53469-21-9	Aroclor 1242	1.0	< 1.0 U
12672-29-6	Aroclor 1248	1.0	< 1.0 U
11097-69-1	Aroclor 1254	1.0	< 1.0 U
11096-82-5	Aroclor 1260	1.0	< 1.0 U
11104-28-2	Aroclor 1221	1.0	< 1.0 U
11141-16-5	Aroclor 1232	1.0	< 1.0 U

Reported in μg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	60.2%
Tetrachlorometaxylene	72.2%

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

Client ID	DCBP	TCMX	TOT OUT
MB-082305	60.2%	72.2%	0
LCS-082305	62.8%	64.2%	0
LCSD-082305	58.5%	67.0%	0
RINSEATE BLANK	49.2%	71.5%	0

	LCS/MB LIMITS	QC LIMITS
(DCBP) = Decachlorobiphenyl	(42-138)	(25-134)
(TCMX) = Tetrachlorometaxylene	(32-117)	(25-118)

Prep Method: SW3510C
Log Number Range: 05-14199 to 05-14199

FORM-II SW8082

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: LCS-082305
LCS/LCSD

Lab Sample ID: LCS-082305
LIMS ID: 05-14199
Matrix: Water
Data Release Authorized:
Reported: 09/06/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 08/23/05

Date Analyzed LCS: 08/25/05 23:02
LCSD: 08/25/05 23:19
Instrument/Analyst LCS: ECD5/PK
LCSD: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: No

Sample Amount LCS: 500 mL
LCSD: 500 mL
Final Extract Volume LCS: 5.0 mL
LCSD: 5.0 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Silica Gel: No
Acid Cleanup: No

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	3.78	5.12	73.8%	3.96	5.12	77.3%	4.7%
Aroclor 1260	4.35	5.12	85.0%	4.54	5.12	88.7%	4.3%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	62.8%	58.5%
Tetrachlorometaxylene	64.2%	67.0%

Results reported in µg/L
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: A-2-M-2005
SAMPLE

Lab Sample ID: IK93L
LIMS ID: 05-14189
Matrix: Sediment
Data Release Authorized: VTS
Reported: 09/05/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 09/01/05 00:25
Instrument/Analyst: ECD5/PK
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
pH: 6.1
Percent Moisture: 19.8%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	Aroclor 1260	19	< 19 U
11104-28-2	Aroclor 1221	19	< 19 U
11141-16-5	Aroclor 1232	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	68.8%
Tetrachlorometaxylene	65.5%

PESTICIDES

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: A-2-M-2005
SAMPLE

Lab Sample ID: IK93L
LIMS ID: 05-14189
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 09/01/05 07:07
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: 6.1
Percent Moisture: 19.8%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-54-8	4,4'-DDD	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
118-74-1	Hexachlorobenzene	0.97	< 0.97 U
87-68-3	Hexachlorobutadiene	0.97	< 0.97 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	85.0%
Tetrachlorometaxylene	81.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: AB-M-2005
SAMPLE

Lab Sample ID: IK93T
LIMS ID: 05-14197
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 09/01/05 02:04
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 26.2 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: 6.8
Percent Moisture: 17.2%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-54-8	4,4'-DDD	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
118-74-1	Hexachlorobenzene	0.96	< 0.96 U
87-68-3	Hexachlorobutadiene	0.96	< 0.96 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	69.8%
Tetrachlorometaxylene	72.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: B-2-M-2005
SAMPLE

Lab Sample ID: IK93U
LIMS ID: 05-14198
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 09/01/05 08:15
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 26.0 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: 6.8
Percent Moisture: 14.6%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-54-8	4,4'-DDD	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
118-74-1	Hexachlorobenzene	0.96	< 0.96 U
87-68-3	Hexachlorobutadiene	0.96	< 0.96 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	73.2%
Tetrachlorometaxylene	78.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: CD-M-2005
SAMPLE

Lab Sample ID: IK93S
LIMS ID: 05-14196
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 09/01/05 01:30
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: 6.4
Percent Moisture: 21.0%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
118-74-1	Hexachlorobenzene	0.98	< 0.98 U
87-68-3	Hexachlorobutadiene	0.98	< 0.98 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	76.5%
Tetrachlorometaxylene	78.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: E-M-2005
SAMPLE

Lab Sample ID: IK93R
LIMS ID: 05-14195
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 09/01/05 00:57
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: 6.7
Percent Moisture: 19.3%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
118-74-1	Hexachlorobenzene	0.98	< 0.98 U
87-68-3	Hexachlorobutadiene	0.98	< 0.98 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	78.2%
Tetrachlorometaxylene	80.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: F-1-M-2005
SAMPLE

Lab Sample ID: IK93P
LIMS ID: 05-14193
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 23:49
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: 6.6
Percent Moisture: 15.7%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
118-74-1	Hexachlorobenzene	0.99	< 0.99 U
87-68-3	Hexachlorobutadiene	0.99	< 0.99 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	67.2%
Tetrachlorometaxylene	73.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: FD-1-M-2005
SAMPLE

Lab Sample ID: IK93Q
LIMS ID: 05-14194
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 09/01/05 00:23
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: 6.8
Percent Moisture: 16.6%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
118-74-1	Hexachlorobenzene	0.98	< 0.98 U
87-68-3	Hexachlorobutadiene	0.98	< 0.98 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	80.5%
Tetrachlorometaxylene	79.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: F-2-M-2005
SAMPLE

Lab Sample ID: IK930
LIMS ID: 05-14192
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 09/01/05 07:41
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 26.0 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: 6.7
Percent Moisture: 17.6%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-54-8	4,4'-DDD	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
118-74-1	Hexachlorobenzene	0.96	< 0.96 U
87-68-3	Hexachlorobutadiene	0.96	< 0.96 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	68.8%
Tetrachlorometaxylene	89.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: G-M-2005
SAMPLE

Lab Sample ID: IK93K
LIMS ID: 05-14188
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 21:00
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 26.3 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: 6.7
Percent Moisture: 16.8%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-54-8	4,4'-DDD	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
118-74-1	Hexachlorobenzene	0.95	< 0.95 U
87-68-3	Hexachlorobutadiene	0.95	< 0.95 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	72.5%
Tetrachlorometaxylene	76.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: HI-M-2005
SAMPLE

Lab Sample ID: IK93J
LIMS ID: 05-14187
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 17:04
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.3 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: 6.4
Percent Moisture: 19.0%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
118-74-1	Hexachlorobenzene	0.99	< 0.99 U
87-68-3	Hexachlorobutadiene	0.99	< 0.99 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	76.5%
Tetrachlorometaxylene	74.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: J-M-2005
SAMPLE

Lab Sample ID: IK93I
LIMS ID: 05-14186
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 09/01/05 06:34
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 26.2 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: 6.5
Percent Moisture: 18.0%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-54-8	4,4'-DDD	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
118-74-1	Hexachlorobenzene	0.95	< 0.95 U
87-68-3	Hexachlorobutadiene	0.95	< 0.95 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	96.2%
Tetrachlorometaxylene	101%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: K-M-2005
SAMPLE

Lab Sample ID: IK93N
LIMS ID: 05-14191
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 22:08
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: 6.6
Percent Moisture: 15.8%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
118-74-1	Hexachlorobenzene	0.99	< 0.99 U
87-68-3	Hexachlorobutadiene	0.99	< 0.99 U

Reported in μg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	71.2%
Tetrachlorometaxylene	71.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: L-M-2005
SAMPLE

Lab Sample ID: IK93H
LIMS ID: 05-14185
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 16:30
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: 6.5
Percent Moisture: 18.0%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-54-8	4,4'-DDD	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
118-74-1	Hexachlorobenzene	0.97	< 0.96 U
87-68-3	Hexachlorobutadiene	0.97	< 0.96 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	79.2%
Tetrachlorometaxylene	74.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: M-M-2005
SAMPLE

Lab Sample ID: IK93F
LIMS ID: 05-14183
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 15:22
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: 6.3
Percent Moisture: 16.1%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
118-74-1	Hexachlorobenzene	0.98	< 0.98 U
87-68-3	Hexachlorobutadiene	0.98	< 0.98 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	72.8%
Tetrachlorometaxylene	84.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: MD-M-2005
SAMPLE

Lab Sample ID: IK93G
LIMS ID: 05-14184
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 15:56
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: 6.3
Percent Moisture: 18.2%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
118-74-1	Hexachlorobenzene	0.98	< 0.98 U
87-68-3	Hexachlorobutadiene	0.98	< 0.98 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	75.5%
Tetrachlorometaxylene	86.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: N-M-2005
SAMPLE

Lab Sample ID: IK93M
LIMS ID: 05-14190
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 21:34
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: 6.8
Percent Moisture: 19.2%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	1.9	< 2.0 U
72-54-8	4,4'-DDD	1.9	< 2.0 U
50-29-3	4,4'-DDT	1.9	< 2.0 U
118-74-1	Hexachlorobenzene	0.97	< 0.97 U
87-68-3	Hexachlorobutadiene	0.97	< 0.97 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	78.0%
Tetrachlorometaxylene	79.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: O-M-2005
SAMPLE

Lab Sample ID: IK93E
LIMS ID: 05-14182
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 14:49
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.9 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: 7.0
Percent Moisture: 16.2%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-54-8	4,4'-DDD	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
118-74-1	Hexachlorobenzene	0.96	< 0.96 U
87-68-3	Hexachlorobutadiene	0.96	< 0.96 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	76.5%
Tetrachlorometaxylene	71.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: P-M-2005
SAMPLE

Lab Sample ID: IK93D
LIMS ID: 05-14181
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 14:15
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 26.2 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: 7.1
Percent Moisture: 17.4%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-54-8	4,4'-DDD	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
118-74-1	Hexachlorobenzene	0.95	< 0.95 U
87-68-3	Hexachlorobutadiene	0.95	< 0.95 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	75.5%
Tetrachlorometaxylene	73.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: Q-M-2005
SAMPLE

Lab Sample ID: IK93B
LIMS ID: 05-14179
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 13:07
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: 7.1
Percent Moisture: 15.2%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
118-74-1	Hexachlorobenzene	0.98	< 0.98 U
87-68-3	Hexachlorobutadiene	0.98	< 0.98 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	74.5%
Tetrachlorometaxylene	76.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: R-M-2005
SAMPLE

Lab Sample ID: IK93C
LIMS ID: 05-14180
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 13:41
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: 6.9
Percent Moisture: 20.5%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-54-8	4,4'-DDD	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
118-74-1	Hexachlorobenzene	0.97	< 0.97 U
87-68-3	Hexachlorobutadiene	0.97	< 0.97 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	78.8%
Tetrachlorometaxylene	57.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: S-M-2005
SAMPLE

Lab Sample ID: IK93A
LIMS ID: 05-14178
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/15/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 12:33
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 26.3 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: 6.9
Percent Moisture: 19.5%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-54-8	4,4'-DDD	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
118-74-1	Hexachlorobenzene	0.95	< 0.95 U
87-68-3	Hexachlorobutadiene	0.95	< 0.95 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	74.8%
Tetrachlorometaxylene	85.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: K-M-2005
MATRIX SPIKE

Lab Sample ID: IK93N
LIMS ID: 05-14191
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 22:42
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 26.0 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: 6.6
Percent Moisture: 15.8%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-54-8	4,4'-DDD	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	---
118-74-1	Hexachlorobenzene	0.96	---
87-68-3	Hexachlorobutadiene	0.96	---

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	72.2%
Tetrachlorometaxylene	76.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: K-M-2005
MATRIX SPIKE DUP

Lab Sample ID: IK93N
LIMS ID: 05-14191
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 23:15
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: 6.6
Percent Moisture: 15.8%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	---
118-74-1	Hexachlorobenzene	0.98	---
87-68-3	Hexachlorobutadiene	0.98	---

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	66.8%
Tetrachlorometaxylene	71.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: MB-082505
METHOD BLANK

Lab Sample ID: MB-082505
LIMS ID: 05-14191
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 11:26
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.0 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: NA
Percent Moisture: NA

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	1.0	< 1.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	74.5%
Tetrachlorometaxylene	61.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: MB-082505
METHOD BLANK

Lab Sample ID: MB-082505
LIMS ID: 05-14198
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Date Extracted: 08/25/05
Date Analyzed: 09/01/05 02:38
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.0 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: NA
Percent Moisture: NA

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	2.0	< 2.0 U
72-54-8	4,4'-DDD	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	1.0	< 1.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	86.8%
Tetrachlorometaxylene	90.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: SRM SQ-1
STANDARD REFERENCE

Lab Sample ID: SRM SQ-1
LIMS ID: 05-14191
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 17:38
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 15.0 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: NA
Percent Moisture: 40.2%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	3.3	< 3.3 U
72-54-8	4,4'-DDD	3.3	< 3.3 U
50-29-3	4,4'-DDT	9.3	< 9.3 Y
118-74-1	**Hexachlorobenzene**	**1.7**	**2.3**
87-68-3	**Hexachlorobutadiene**	**1.7**	**3.4**

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	85.0%
Tetrachlorometaxylene	99.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: SRM SQ-1
STANDARD REFERENCE

Lab Sample ID: SRM SQ-1
LIMS ID: 05-14198
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Date Extracted: 08/25/05
Date Analyzed: 09/01/05 03:45
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 15.0 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: NA
Percent Moisture: 40.2%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	7.2	< 7.2 Y
72-54-8	4,4'-DDD	3.3	< 3.3 U
50-29-3	4,4'-DDT	3.3	< 3.3 U
118-74-1	**Hexachlorobenzene**	**1.7**	**1.9 J**
87-68-3	**Hexachlorobutadiene**	**1.7**	**4.0**

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	84.5%
Tetrachlorometaxylene	89.0%

ANALYTICAL RESOURCES INCORPORATED

SW8081 PESTICIDE SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

Client ID	DCBP	TCMX	TOT OUT
S-M-2005	74.8%	85.0%	0
Q-M-2005	74.5%	76.2%	0
R-M-2005	78.8%	57.8%	0
P-M-2005	75.5%	73.0%	0
O-M-2005	76.5%	71.0%	0
M-M-2005	72.8%	84.2%	0
MD-M-2005	75.5%	86.2%	0
L-M-2005	79.2%	74.8%	0
J-M-2005	96.2%	101%	0
HI-M-2005	76.5%	74.8%	0
G-M-2005	72.5%	76.8%	0
A-2-M-2005	85.0%	81.0%	0
N-M-2005	78.0%	79.8%	0
MB-082505	74.5%	61.5%	0
LCS-082505	75.5%	65.8%	0
SRM SQ-1	85.0%	99.8%	0
K-M-2005	71.2%	71.8%	0
K-M-2005 MS	72.2%	76.5%	0
K-M-2005 MSD	66.8%	71.2%	0
F-2-M-2005	68.8%	89.0%	0
F-1-M-2005	67.2%	73.8%	0
FD-1-M-2005	80.5%	79.2%	0
E-M-2005	78.2%	80.8%	0
CD-M-2005	76.5%	78.2%	0
AB-M-2005	69.8%	72.8%	0
MB-082505	86.8%	90.0%	0
LCS-082505	68.2%	78.5%	0
SRM SQ-1	84.5%	89.0%	0
B-2-M-2005	73.2%	78.5%	0

	LCS/MB LIMITS	QC LIMITS
(DCBP) = Decachlorobiphenyl	(46-110)	(18-128)
(TCMX) = Tetrachlorometaxylene	(13-104)	(11-108)

Prep Method: SW3550B
Log Number Range: 05-14178 to 05-14198

FORM-II SW8081

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: K-M-2005
MS/MSD

Lab Sample ID: IK93N
LIMS ID: 05-14191
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted MS/MSD: 08/25/05

Date Analyzed MS: 08/31/05 22:42
MSD: 08/31/05 23:15
Instrument/Analyst MS: ECD4/YZ
MSD: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount MS: 26.0 g-dry-wt
MSD: 25.5 g-dry-wt
Final Extract Volume MS: 5.0 mL
MSD: 5.0 mL
Dilution Factor MS: 1.00
MSD: 1.00
Silica Gel: Yes
pH: 6.6
Percent Moisture: 15.8%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
4,4'-DDT	< 1.97	13.0	19.3	67.4%	13.7	19.6	69.9%	5.2%
Hexachlorobenzene	< 0.986	8.00	9.63	83.1%	7.53	9.80	76.8%	6.1%
Hexachlorobutadiene	< 0.986	7.32	9.63	76.0%	6.39	9.80	65.2%	13.6%

Reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: LCS-082505
LAB CONTROL

Lab Sample ID: LCS-082505
LIMS ID: 05-14191
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 08/31/05 12:00
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.0 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: NA
Percent Moisture: NA

Analyte	Lab Control	Spike Added	Recovery
4,4'-DDE	7.40	8.00	92.5%
4,4'-DDD	6.52	8.00	81.5%
4,4'-DDT	7.06	8.00	88.2%
Hexachlorobenzene	3.12	4.00	78.0%
Hexachlorobutadiene	2.30	4.00	57.5%

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	75.5%
Tetrachlorometaxylene	65.8%

Reported in µg/kg (ppb)

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: LCS-082505
LAB CONTROL

Lab Sample ID: LCS-082505
LIMS ID: 05-14198
Matrix: Sediment
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1 7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/25/05
Date Analyzed: 09/01/05 03:11
Instrument/Analyst: ECD4/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.0 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
pH: NA
Percent Moisture: NA

Analyte	Lab Control	Spike Added	Recovery
4,4'-DDE	5.52	8.00	69.0%
4,4'-DDD	6.64	8.00	83.0%
4,4'-DDT	5.90	8.00	73.8%
Hexachlorobenzene	3.66	4.00	91.5%
Hexachlorobutadiene	3.04	4.00	76.0%

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	68.2%
Tetrachlorometaxylene	78.5%

Reported in µg/kg (ppb)

GC ANALYSIS RUN LOG - ECD 4

ANALYTICAL RESOURCES INCORPORATED

Operator: YZ
Column: STX CLP/CLP2
Date run start: 8/31/05
Parameters:
Vol. injected: 1 µl

METH /CHEM2/ECD4.1/ Pest 0830m
Std ID #'s: SCC P 1732
DATA /CHEM2/ECD4.1/ 0831b

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd4.i/2005AUG30.b/0831.b

	Inject Date/Time	Filename	LabID	ClientId
1	31-AUG-2005 10:18	0831-01R.d	DS2	
2	31-AUG-2005 10:52	0831-02R.d	INDAC2	
3	31-AUG-2005 11:26	0831-03R.d	IK93MBS1	IK93MBS1
4	31-AUG-2005 12:00	0831-04R.d	IK93LCSS1	IK93LCSS1
5	31-AUG-2005 12:33	0831-05R.d	IK93A	S-M-2005
6	31-AUG-2005 13:07	0831-06R.d	IK93B	Q-M-2005
7	31-AUG-2005 13:41	0831-07R.d	IK93C	R-M-2005
8	31-AUG-2005 14:15	0831-08R.d	IK93D	P-M-2005
9	31-AUG-2005 14:49	0831-09R.d	IK93E	O-M-2005
10	31-AUG-2005 15:22	0831-10R.d	IK93F	M-M-2005
11	31-AUG-2005 15:56	0831-11R.d	IK93G	MD-M-2005
12	31-AUG-2005 16:30	0831-12R.d	IK93H	L-M-2005
13	31-AUG-2005 17:04	0831-13R.d	IK93J	HI-M-2005
14	31-AUG-2005 17:38	0831-14R.d	IK93SRM	SQ-1
15	31-AUG-2005 18:11	0831-15R.d	IJ52MBS1	
16	31-AUG-2005 18:45	0831-16R.d	IJ52A	
17	31-AUG-2005 19:19	0831-17R.d	RINSE	
18	31-AUG-2005 19:53	0831-18R.d	DS3	
19	31-AUG-2005 20:27	0831-19R.d	INDAC3	
20	31-AUG-2005 21:00	0831-20R.d	IK93K	G-M-2005
21	31-AUG-2005 21:34	0831-21R.d	IK93M	N-M-2005
22	31-AUG-2005 22:08	0831-22R.d	IK93N	K-M-2005
23	31-AUG-2005 22:42	0831-23R.d	IK93NMS	K-M-2005 MS
24	31-AUG-2005 23:15	0831-24R.d	IK93NMSD	K-M-2005 MSD
25	31-AUG-2005 23:49	0831-25R.d	IK93P	F-1-M-2005
26	01-SEP-2005 00:23	0831-26R.d	IK93Q	FD-1-M-2005
27	01-SEP-2005 00:57	0831-27R.d	IK93R	E-M-2005
28	01-SEP-2005 01:30	0831-28R.d	IK93S	CD-M-2005
29	01-SEP-2005 02:04	0831-29R.d	IK93T	AB-M-2005
30	01-SEP-2005 02:38	0831-30R.d	IK93MBS2	IK93MBS2
31	01-SEP-2005 03:11	0831-31R.d	IK93LCSS2	IK93LCSS2
32	01-SEP-2005 03:45	0831-32R.d	IK93SRM	SQ-1
33	01-SEP-2005 04:19	0831-33R.d	RINSE	
34	01-SEP-2005 04:53	0831-34R.d	RINSE	
35	01-SEP-2005 05:26	0831-35R.d	DS4	
36	01-SEP-2005 06:00	0831-36R.d	INDAC4	
37	01-SEP-2005 06:34	0831-37R.d	IK93I	J-M-2005
38	01-SEP-2005 07:07	0831-38R.d	IK93L	A-2-M-2005
39	01-SEP-2005 07:41	0831-39R.d	IK93O	F-2-M-2005
40	01-SEP-2005 08:15	0831-40R.d	IK93U	B-2-M-2005
41	01-SEP-2005 08:49	0831-41R.d	RINSE	
42	01-SEP-2005 09:22	0831-42R.d	RINSE	
43	01-SEP-2005 09:56	0831-43R.d	RINSE	
44	01-SEP-2005 10:30	0831-44R.d	RINSE	
45	01-SEP-2005 11:04	0831-45R.d	DS5	
46	01-SEP-2005 11:37	0831-46R.d	INDAC5	

New merlin septum, RTs updated.
CCALs: DS4: DDT breakdown 15.4% on CLP2 INDAC4: DDD 31% high on CLP1 DS5: DDT breakdown 22.3% on CLP1 24.1% on CLP2 INDAC5: CLP1: DDE 20.2% low, DDD 30.5% high, DDT 39.4% low CLP2: DDE 22.7% low, DDT 44.8% low.

Maintenance Verification: INDAC 2.

Record date of ICal or CCal that demonstes that the instrument is in control following maintenance

Page: 1/33

Approval:

Rev. 5
9/13/01

4105F

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081A

Sample ID: RINSEATE BLANK SAMPLE

Lab Sample ID: IK93V
LIMS ID: 05-14199
Matrix: Water
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1 7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted: 08/23/05
Date Analyzed: 08/26/05 13:52
Instrument/Analyst: ECD3/YZ
GPC Cleanup: No
Sulfur Cleanup: No

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: 6.6
Florisil Cleanup: No
Silica Gel: No

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.10	< 0.10 U
118-74-1	Hexachlorobenzene	0.050	< 0.050 U
87-68-3	Hexachlorobutadiene	0.050	< 0.050 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	69.8%
Tetrachlorometaxylene	91.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides by GC/ECD Method SW8081A

Sample ID: MB-082305
METHOD BLANK

Lab Sample ID: MB-082305
LIMS ID: 05-14199
Matrix: Water
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: NA
Date Received: NA

Date Extracted: 08/23/05
Date Analyzed: 08/26/05 12:15
Instrument/Analyst: ECD3/YZ
GPC Cleanup: No
Sulfur Cleanup: No

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: NA
Florisil Cleanup: No
Silica Gel: No

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.10	< 0.10 U
118-74-1	Hexachlorobenzene	0.050	< 0.050 U
87-68-3	Hexachlorobutadiene	0.050	< 0.050 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	82.5%
Tetrachlorometaxylene	78.5%

ANALYTICAL RESOURCES INCORPORATED

SW8081/PESTICIDE WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02

Client ID	DCBP	TCMX	TOT OUT
MB-082305	82.5%	78.5%	0
LCS-082305	86.8%	78.0%	0
LCSD-082305	84.8%	79.2%	0
RINSEATE BLANK	69.8%	91.8%	0

	LCS/MB LIMITS	QC LIMITS
(DCBP) = Decachlorobiphenyl	(45-121)	(10-133)
(TCMX) = Tetrachlorometaxylene	(29-93)	(17-110)

Prep Method: SW3510C
Log Number Range: 05-14199 to 05-14199

FORM-II SW8081

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081A

Sample ID: LCS-082305
LCS/LCSD

Lab Sample ID: LCS-082305
LIMS ID: 05-14199
Matrix: Water
Data Release Authorized:
Reported: 09/02/05

QC Report No: IK93-Hart Crowser, Inc.
Project: MIDDLE WATERWAY YEAR 1
7946-02
Date Sampled: 08/17/05
Date Received: 08/18/05

Date Extracted LCS/LCSD: 08/23/05
Date Analyzed LCS: 08/26/05 12:48
LCSD: 08/26/05 13:20
Instrument/Analyst LCS: ECD3/YZ
LCSD: ECD3/YZ
GPC Cleanup: No
Florisil Cleanup: No

Sample Amount LCS: 500 mL
LCSD: 500 mL
Final Extract Volume LCS: 5.0 mL
LCSD: 5.0 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Sulfur Cleanup: No
Silica Gel: No

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
4,4'-DDE	0.391	0.400	97.8%	0.396	0.400	99.0%	1.3%
4,4'-DDD	0.373	0.400	93.2%	0.381	0.400	95.2%	2.1%
4,4'-DDT	0.395	0.400	98.8%	0.400	0.400	100%	1.3%
Hexachlorobenzene	0.144	0.200	72.0%	0.150	0.200	75.0%	4.1%
Hexachlorobutadiene	0.132	0.200	66.0%	0.132	0.200	66.0%	0.0%

Pest/PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	86.8%	84.8%
Tetrachlorometaxylene	78.0%	79.2%

Results reported in μg/L (ppb)
RPD calculated using sample concentrations per SW846.

APPENDIX C
YEAR 0 BASELINE SEDIMENT SAMPLING ANALYSIS SUMMARY

(NOTE: TABLE EXCERPTED FROM THE YEAR 0 (2004) MONITORING REPORT

Table 4 - Analytical Results for Year 0 Sediment Samples - Metals

Sample ID	Sampling Date	Concentration in mg/kg									
		Antimony	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Silver	Zinc
	SQO:		57	5.1		390	450	0.59			410
SMU 51											
A-2-M-2004	10/19/2004	0.20 UJ	2.21	0.10 U			6.49	0.031		0.10 UJ	31
AB-M-2004	10/15/2004							0.032			
B-2-M-2004	10/19/2004	0.20 UJ	2.31	0.10 U			7.18	0.023	30.4	0.10 UJ	30
B-2-Cc-2004	10/20/2004	0.20 UJ	3.26	0.10 U			4.22	0.021	25.7	0.10 UJ	37
CD-M-2004	10/15/2004							0.028			
EF-M-2004	10/15/2004					13.5		0.022			
G-M-2004	10/15/2004		2.84	0.10 U	27.5	12.8	6.74	0.023			31
HIJ-M-2004	10/15/2004			0.10 U				0.028			31
X-M-2004[a]	10/19/2004	0.20 UJ	2.58	0.10 U			9.15	0.035	32.7	0.10 UJ	32
SMU 51b											
K-M-2004	10/20/2005							0.026			
M-M-2004	10/14/2005							0.027			
O-M-2004	10/14/2005							0.035			
P-M-2004	10/14/2005							0.029			
R-M-2004	10/14/2005	0.20 UJ						0.024			
S-M-2004	10/14/2005							0.029			
Y-M-2004[b]	10/15/2005							0.024			

Notes:

[a] Duplicate of sample B-2-M-2004.

[b] Duplicate sample located 20 feet east and 5 feet north of sample K-M-2004.

U = Not detected at reporting limit (RL) indicated.

Table 5 - Analytical Results for Year 0 Sediment Samples - Organochlorine Pesticides and Polychlorinated Biphenyls (PCBs)

		SMU 51a					SMU 51b
Sample ID:	SQO	A-2-M-2004	B-2-M-2004	EF-M-2004	B-2-Cc-2004	X-M-2004[a]	S-M-2004
Sampling Date:		10/19/2004	10/19/2004	10/15/2004	10/20/2004	10/19/2004	10/14/2004
Pesticide/PCBs in µg/kg							
4,4'-DDE	9	0.58 U	0.60 U		0.57 U	0.57 U	0.59 U
4,4'-DDD	16	0.58 U	0.60 U		0.57 U	0.57 U	0.59 U
4,4'-DDT	34	0.58 U	0.60 U		0.57 U	0.57 U	0.59 U
Aroclor 1016		7.3 U	7.5 U	7.1 U	7.1 U	7.2 U	7.3 U
Aroclor 1221		7.3 U	7.5 U	7.1 U	7.1 U	7.2 U	7.3 U
Aroclor 1232		7.3 U	7.5 U	7.1 U	7.1 U	7.2 U	7.3 U
Aroclor 1242		7.3 U	7.5 U	7.1 U	7.1 U	7.2 U	7.3 U
Aroclor 1248		7.3 U	7.5 U	7.1 U	7.1 U	7.2 U	7.3 U
Aroclor 1254		7.3 U	7.5 U	7.1 U	7.1 U	7.2 U	7.3 U
Aroclor 1260		7.3 U	7.5 U	7.1 U	7.1 U	7.2 U	7.3 U
Aroclor 1262		7.3 U	7.5 U	7.1 U	7.1 U	7.2 U	7.3 U
Aroclor 1268		7.3 U	7.5 U	7.1 U	7.1 U	7.2 U	7.3 U
Total PCBs	300	7.3 U	7.5 U	7.1 U	7.1 U	7.2 U	7.3 U

Notes:

[a] Duplicate of sample B-2-M-2004.

U = Not detected at reporting limit (RL) indicated.

Table 6 - Analytical Results for Year 0 Sediment Samples - Semivolatile Organic Compounds (SVOCs)

		SMU 51a										SMU 51b								
Sample ID	SQO	A-2-M-2004	AB-M-2004	EF-M-2004	B-2-Cc-2004	B-2-M-2004	CD-M-2004	G-M-2004	HIJ-M-2004	X-M-2004[a]	K-M-2004	L-M-2004	M-M-2004	N-M-2004	O-M-2004	P-M-2004	Q-M-2004	R-M-2004	S-M-2004	Y-M-2004[b]
Sampling Date		10/19/2004	10/15/2004	10/15/2004	10/20/2004	10/19/2004	10/15/2004	10/15/2004	10/15/2004	10/19/2004	10/20/2004	10/20/2004	10/14/2004	10/14/2004	10/14/2004	10/14/2004	10/14/2004	10/14/2004	10/14/2004	10/15/2004
LPAHs in µg/kg																				
2-Methylnaphthalene	670	5.8 U	6.9 J	4.9 J	5.7 U	6.1	5.9 U	6	5.3 U	13	5.9 U	4.4 J	3.2 J	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	7.8
Acenaphthene	500	5.8 U	6.9 J	12 U	5.7 U	5.7 U	5.9 U	5 U	5.3 U	7.5	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
Acenaphthylene	1300	5.8 U	6.9 J	12 U	5.7 U	7.9	5.9 U	5 U	5.3 U	7	5.9 U	6.2 U	3.4 J	6.2 U	5.1 U	6.1 U	6 U	5.9 U	4.6 J	5 J
Anthracene	960	5.1 J	8.8 J	3.3 J	5.7 U	6.7	5.9 U	5 U	5.3 U	10	5.9 U	5.1 J	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	4.9 J	5.7 J
Fluorene	540	5.8 U	7.7 J	3.4 J	5.7 U	5.7 U	5.9 U	5 U	5.3 U	6.7	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
Naphthalene	2100	5.8 U	15	5.9 J	5.7 U	14	6.9	6.4	5.3 U	28	5.9 U	6.8	5.8 U	6.2 J	5.1 U	6.1 U	3.8 J	5.9 J	3.2 J	16 J
Phenanthrene	1500	20	35	12 UJ	11	24	14	8.1	9.7	44	5.6 J	13	12	8	8.1	6.6	8.2	8.7	10	28
Total LPAHs	5200	25.1	87.2	17.5	11	58.7	20.9	20.5	9.7	116.2	5.6 J	29.3	18.6	14.2	8.1	6.6	12	14.6	22.7	62.5
HPAHs in µg/kg																				
Benzo(a)anthracene	1600	14	22	7.2 J	5.7 U	21	7.6	5 U	6.5	21	5.9 U	8.9	10	3.5 J	5.1 U	6.1 U	3.5 J	5.9 U	42	17
Benzo(a)pyrene	1600	19	12	0.81 J	5.7 U	21	5.9 U	5 U	5.3 U	21	5.9 U	7.6	10	6.2 U	5.1 U	6.1 U	3.1 J	5.9 U	39	20
Benzo(ghi)perylene	720	7.8	22	12 J	5.7 U	10	5.9 U	5 U	5.3 U	11	5.9 U	8.3	13	6.2 U	5.1 U	6.1 U	3.3 J	5.9 U	30	12
Chrysene	2800	20	33	17	6.8	34	10	8.3	14	40	5.9 U	15	21	8	5.4	4.9 J	6.1	5.9 U	126	27
Dibenzo(a,h)anthracene	230	5.8 U	12 U	12 U	5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	5.7 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	9.3	4 J
Fluoranthene	2500	29	56	15	8.5	58	18	11	12	69	6.7	21	20	9.9	12	8.6	11	6.1	168 J	38
Indeno(1,2,3-cd)pyrene	690	6.7	13	7.9 J	5.7 U	9.7	5.9 U	5 U	5.3 U	7.9	59 U	5.7 J	8.8	6.2 U	5.1 U	6.1 U	6 U	5.9 U	27	9.6
Pyrene	3300	40	60	23	9.1	66	28	14	19	94	9.5	27	28	10	10	7.9	11	5.2 J	127	53
Benzo(b)fluoranthene		19 J	23 U	24 U	5.7 UJ	32 J	7.4 J	7.3 J	12 J	43 J	5.9 UJ	10 J	12 J	6.2 UJ	5.1 UJ	6.1 UJ	4.4 J	5.9 UJ	79 J	22 J
Benzo(k)fluoranthene		18 J	23 U	24 U	5.7 UJ	36 J	8.3 J	9.5 J	9.8 J	41 J	5.9 UJ	12 J	19 J	6.2 UJ	5.1 UJ	6.1 UJ	4.7 J	5.9 UJ	85 J	25 J
Total Benzofluoranthenes	3600	37 J	23 U	24 U	5.7 UJ	68 J	15.7 J	16.8 J	21.8 J	84 J	5.9 UJ	22 J	31 J	6.2 UJ	5.1 UJ	6.1 UJ	9.1 J	5.9 UJ	164 J	47 J
Total HPAHs	17000	173.5	218	82.91	24.4	287.7	79.3	50.1	73.3	347.9	16.2	115.5	141.8	31.4	27.4	21.4	47.1	11.3	732.3	227.6
Chlorinated Hydrocarbons in µg/kg																				
1,2,4-Trichlorobenzene	51	5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
1,2-Dichlorobenzene	50	5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
1,3-Dichlorobenzene	170	5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
1,4-Dichlorobenzene	110	5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
Hexachlorobenzene	22	5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
Phthalates in µg/kg																				
Bis(2-Ethylhexyl)Phthalate	1300	59 UJ			64	69 UJ	73 UJ	38 UJ	43 UJ	62 UJ	65 UJ	35 UJ	46 UJ	49 UJ	52	34 UJ	48 UJ	33 UJ	42 UJ	55 UJ
Butylbenzylphthalate	900	5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
Diethylphthalate	200	11			9.6 UJ	10 UJ	9 UJ	12 UJ	5.3 U	10 UJ	26 UJ	24 UJ	26 UJ	9.9 UJ	5.1 U	7.6 UJ	6.9 UJ	8 UJ	9.6 UJ	16 UJ
Dimethylphthalate	160	5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
Di-N-Butylphthalate	1400	13 UJ			10 UJ	10 UJ	7.6 UJ	10 UJ	10 UJ	6 U	27 UJ	27 UJ	17 UJ	22 UJ	10 UJ	16 UJ	35 UJ	5.9 UJ	10 UJ	14 UJ
Di-N-Octyl Phthalate	6200	5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
Phenolics (Acids) in µg/kg																				
2,4,5-Trichlorophenol		5.8 UJ			5.7 UJ	5.7 UJ	5.9 UJ	5 UJ	5.3 UJ	6 UJ	5.9 UJ	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 UJ
2,4,6-Trichlorophenol		5.8 UJ			5.7 UJ	5.7 UJ	5.9 UJ	5 UJ	5.3 UJ	6 UJ	5.9 UJ	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 UJ
2,4-Dichlorophenol		5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
2,4-Dimethylphenol	29	5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
2,4-Dinitrophenol		464 UJ			455 UJ	455 UJ	468 UJ	403 UJ	426 U	478 UJ	471 UJ	493 UJ	460 UJ	492 UJ	404 UJ	486 UJ	480 UJ	475 UJ	489 UJ	476 UJ
2-Chlorophenol		5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
2-Methylphenol	63	5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
2-Nitrophenol		5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
4,6-Dinitro-2-Methylphenol		232 UJ			228 UJ	228 UJ	234 UJ	202 UJ	213 UJ	239 UJ	235 UJ	247 UJ	230 UJ	246 UJ	202 UJ	243 UJ	240 UJ	237 UJ	245 UJ	238 UJ
4-Chloro-3-Methylphenol		5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
4-Methylphenol	670	5.8 U			5.7 U	5.7 U	13	5 U	5.3 U	6 U	5.9 U	6.2 U	42	6.2 U	5.1 U	6.1 U	6 U	5.9 U	4.4 J	5.9 U
4-Nitrophenol		58 UJ			57 UJ	57 UJ	59 UJ	50 UJ	53 U	60 UJ	59 UJ	62 U	58 U	62 U	50 U	61 U	60 U	59 U	REJ	59 UJ
Benzoic Acid	650	**697** J			455 UJ	**720** J	**704** J	632 J	**673** J	**724** J	**768** J	493 UJ	460 UJ	492 UJ	404 UJ	486 UJ	480 UJ	475 UJ	489 UJ	**728** J
Benzyl Alcohol	73	5.8 UJ			5.7 UJ	5.7 UJ	5.9 UJ	5 UJ	5.3 UJ	6 UJ	5.9 UJ	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 UJ
Pentachlorophenol	360	58 UJ			57 UJ	57 UJ	59 UJ	50 UJ	53 UJ	60 UJ	59 UJ	62 U	58 U	62 U	50 U	61 U	60 U	59 U	61 U	203 J
Phenol	420	5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
Misc. Extractables in µg/kg																				
1,2-Diphenylhydrazine		5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
1-Methylnaphthalene		5.8 U	4.8 J	2.7 J	5.7 U	6.1 U	5.9 U	6 U	5.3 U	7.8	5.9 U	3.5 J	1.6 J	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	4.9 J
2,2'-Oxybis(1-Chloropropane)		5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
2,4-Dinitrotoluene		5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
2,6-Dinitrotoluene		5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
2-Chloronaphthalene		5.8 U	12 U	12 U	5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
2-Nitroaniline		5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
3,3'-Dichlorobenzidiene		5.8 UJ			5.7 UJ	5.7 UJ	5.9 UJ	5 UJ	5.3 UJ	6 UJ	5.9 UJ	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	REJ	5.9 UJ
3B-Coprostanol		58 UJ			57 UJ	57 UJ	59 UJ	50 UJ	53 UJ	60 UJ	59 UJ	62 UJ	5.8 UJ	62 UJ	51 UJ	61 UJ	60 UJ	59 UJ	61 UJ	59 UJ
3-Nitroaniline		5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
4-Bromophenyl-Phenylether		5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
4-Chloroaniline		5.8 UJ			5.7 UJ	5.7 UJ	5.9 UJ	5 UJ	5.3 U	6 UJ	5.9 UJ	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	REJ	5.9 UJ
4-Chlorophenyl-Phenylether		5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
4-Nitroaniline		12 U			11 U	11 U	12 U	10 U	11 U	12 U	12 U	12 U	12 U	12 U	10 U	12 U	12 U	12 U	12 U	12 U
Aniline		5.8 UJ			5.7 UJ	5.7 UJ	5.9 UJ	5 UJ	5.3 UJ	6 UJ	5.9 UJ	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 UJ
Benzidine		5.8 UJ			5.7 UJ	5.7 UJ	5.9 UJ	5 UJ	5.3 UJ	6 UJ	5.9 UJ	6.2 UJ	5.8 UJ	6.2 UJ	5.1 U	6.1 UJ	6 UJ	5.9 U	REJ	5.9 UJ
Bis(2-Chloroethoxy)Methane		5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
Bis(2-Chloroethyl)Ether		5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
Caffeine		5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
Carbazole		5.8 U	12 U	12 U	5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 UJ	5.8 UJ	6.2 UJ	5.1 UJ	6.1 UJ	6 UJ	5.9 UJ	3 J	6.1 UJ
Dibenzofuran	540	5.8 U	5.3 J	2.3 J	5.7 U	4.4 J	5.9 U	5 U	5.3 U	6.9	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	1.5 J	5.9 U
Hexachlorobutadiene	11	5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
Hexachlorocyclopentadiene		23 UJ			23 UJ	23 UJ	23 UJ	20 UJ	21 UJ	24 UJ	24 UJ	25 U	23 U	25 U	20 U	24 U	24 U	24 U	24 U	24 UJ
Hexachloroethane		5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 UJ	5.9 U
Isophorone		5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
Nitrobenzene		5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
N-Nitrosodimethylamine		12 U			11 U	11 U	12 U	10 U	11 U	12 U	12 U	12 U	12 U	12 U	10 U	12 U	12 U	12 U	12 U	12 U
N-Nitroso-Di-N-Propylamine		5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
N-Nitrosodiphenylamine	28	5.8 U			5.7 U	5.7 U	5.9 U	5 U	5.3 U	6 U	5.9 U	6.2 U	5.8 U	6.2 U	5.1 U	6.1 U	6 U	5.9 U	6.1 U	5.9 U
Pyridine		12 U			11 U	11 U	12 U	10 U	11 U	12 U	12 U	12 U	12 U	12 U	10 U	12 U	12 U	12 U	12 U	12 U
Retene		20	58	19 J	3.6 J	25	17	20	33	37	31	30	27	5.3 J	5.1 U	6.1 U	3.3 J	5.9 U	6.1 U	30

Notes:
[a] Duplicate of sample B-2-M-2004.
[b] Duplicate sample located 20 feet east and 5 feet north of sample K-M-2004.
U = Not detected at reporting limit (RL) indicated.
J = Estimated value.
REJ - Rejected.

Table 7 - Analytical Results for Year 0 Sediment Samples - Volatile Organics (VOCs)

		SMU 51a			
Sample ID:	SQO	A-2-M-2004	B-2-M-2004	B-2-Cc-2004	X-M-2004[a]
Sampling Date:		10/19/2004	10/19/2004	10/20/2004	10/19/2004
Volatiles in µg/kg					
Chloromethane		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
Bromomethane		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
Vinyl Chloride		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
Chloroethane		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
Methylene Chloride		2.3 UJ	2.3 UJ	2.3 UJ	2.3 UJ
Acetone		5.9 UJ	5.7 UJ	5.7 UJ	5.8 UJ
Carbon Disulfide		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
1,1-Dichloroethene		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
1,1-Dichloroethane		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
trans-1,2-Dichloroethene		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
cis-1,2-Dichloroethene		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
Chloroform		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
1,2-Dichloroethane		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
2-Butanone		5.9 UJ	5.7 UJ	5.7 UJ	5.8 UJ
1,1,1-Trichloroethane		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
Carbon Tetrachloride		0.2 UJ	1.1 UJ	1.1 UJ	0.2 UJ
Vinyl Acetate		5.9 UJ	5.7 UJ	5.7 UJ	5.8 UJ
Bromodichloromethane		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
1,2-Dichloropropane		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
cis-1,3-Dichloropropene		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
Trichloroethene		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
Dibromochloromethane		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
1,1,2-Trichloroethane		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
Benzene		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
trans-1,3-Dichloropropene		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
2-Chloroethylvinylether		5.9 UJ	5.7 UJ	5.7 UJ	5.8 UJ
Bromoform		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
4-Methyl-2-Pentanone (MIBK)		5.9 UJ	5.7 U	5.7 UJ	5.8 UJ
2-Hexanone		5.9 UJ	5.7 UJ	5.7 UJ	5.8 UJ
Tetrachloroethene	57	1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
1,1,2,2-Tetrachloroethane		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
Toluene		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
Chlorobenzene		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
Ethylbenzene	10	1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
Styrene		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
Trichlorofluoromethane		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane		2.3 UJ	2.3 UJ	2.3 UJ	2.3 UJ
m,p-Xylene		1.2 J	1.1 UJ	1.1 UJ	1.2 UJ
o-Xylene		1.2 J	1.1 UJ	1.1 UJ	1.2 UJ
Total Xylenes	40	1.2 J	1.1 UJ	1.1 UJ	1.2 UJ
1,2-Dichlorobenzene		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
1,3-Dichlorobenzene		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
1,4-Dichlorobenzene		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
Acrolein		59 UJ	57 UJ	57 UJ	58 UJ
Methyl Iodide		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ

Table 7 - Analytical Results for Year 0 Sediment Samples - Volatile Organics (VOCs)

Sample ID:	SQO	A-2-M-2004	B-2-M-2004	B-2-Cc-2004	X-M-2004[a]
Sampling Date:		10/19/2004	10/19/2004	10/20/2004	10/19/2004
Bromoethane		2.3 UJ	2.3 UJ	2.3 UJ	2.3 UJ
Acrylonitrile		5.9 UJ	5.7 UJ	5.7 UJ	5.8 UJ
1,1-Dichloropropene		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
Dibromomethane		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
1,1,1,2-Tetrachloroethane		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
1,2-Dibromo-3-chloropropane		5.9 UJ	5.7 UJ	5.7 UJ	5.8 UJ
1,2,3-Trichloropropane		2.3 UJ	2.3 UJ	2.3 UJ	2.3 UJ
trans-1,4-Dichloro-2-butene		5.9 UJ	5.7 UJ	5.7 UJ	5.8 UJ
1,3,5-Trimethylbenzene		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
1,2,4-Trimethylbenzene		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
Hexachlorobutadiene		5.9 UJ	5.7 UJ	5.7 UJ	5.8 UJ
Ethylene Dibromide		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
Bromochloromethane		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
2,2-Dichloropropane		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
1,3-Dichloropropane		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
Isopropylbenzene		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
n-Propylbenzene		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
Bromobenzene		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
2-Chlorotoluene		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
4-Chlorotoluene		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
tert-Butylbenzene		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
sec-Butylbenzene		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
4-Isopropyltoluene		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
n-Butylbenzene		1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ
1,2,4-Trichlorobenzene		5.9 UJ	5.7 UJ	5.7 UJ	5.8 UJ
Naphthalene		5.9 UJ	5.7 UJ	5.7 UJ	5.8 UJ
1,2,3-Trichlorobenzene		5.9 UJ	5.7 UJ	5.7 UJ	5.8 UJ

Notes:

[a] Duplicate of sample B-2-M-2004.

U = Not detected at reporting limit (RL) indicated.

J = Estimated value.

APPENDIX D
HABITAT MONITORING REPORT – YEAR 1
MANAGEMENT OF ENVIRONMENTAL RESOURCES, INC.

HABITAT MONITORING REPORT—YEAR 1
MIDDLE WATERWAY RESTORATION SITE
DEPARTMENT OF NATURAL RESOURCES PARCEL
COMMENCEMENT BAY, TACOMA, WASHINGTON

Prepared for: **Hart Crowser**
Seattle, Washington

Prepared by: **Management of Environmental Resources, Inc.**
Seattle, Washington

October 2005

Table of Contents

1.0 INTRODUCTION 1
1.1 Performance Criteria 1
2.0 OBJECTIVES 2
3.0 APPROACH 2
4.0 RESULTS 3
4.1. Mudflat Habitat 3
4.2. Shoreline/Upland Habitat 4
5.0 SUMMARY 6
6.0 RECOMMENDATIONS 7
7.0 REFERENCES 7

ATTACHMENT 1: SITE PHOTOGRAPHS i
ATTACHMENT 2: INTERTIDAL HABITAT OBSERVATIONS i

1.0 INTRODUCTION

This report presents the results of the first year of habitat monitoring following the sediment remedial action and restoration of associated riparian/upland habitats near the head of Middle Waterway (Commencement Bay, Tacoma, Washington). A Vicinity Map and Site Plan are provided on Figures 1 and 2 in the main text of the Year 1 (2005) Monitoring Report (Monitoring Report). Habitat monitoring is being conducted by the Washington State Department of Natural Resources (DNR) to document the performance of restoration activities implemented in conjunction with the remediation of Sediment Management Units (SMUs) 51a and 51b in Middle Waterway Problem Area C. The remedial action was conducted according to the Consent Decree between the U.S. Environmental Protection Agency (EPA), DNR, City of Tacoma (City) and other parties, as referenced in the main text of the Monitoring Report. It should also be noted that EPA's review and approval of the Monitoring Report does not include the habitat restoration component described in this appendix.

Sediment remediation occurred in 2004 and consisted of excavation of contaminated sediments and backfilling with clean sediment in SMU 51a and placement of a thin-layer cap of clean sediment in SMU 51b to enhance natural recovery of this area. In addition, the drainage channel leading from City Outfall No. 200, which discharges at the head of the waterway to SMU 51a, was armored to prevent erosion of cap materials. Construction activities and additional project background for the remedial action are presented in the Remedial Action Completion Report (RACR) (Hart Crowser 2005a). The RACR also presents figures depicting excavation, backfilling, and thin-layer capping completed for the remedial action.

The upland parcel located south of SMU 51a was restored by planting various lowland trees and shrubs in November of 2004, following its use as a staging area for sediment remediation. Several perennial grasses were planted in a transition riparian zone (a low bank) between the high intertidal area and the upland. Due to loss of bank materials during the winter of 2004/2005, erosion control material (jute mats) was added to a portion of the SMU 51a bank slope in March of 2004. Trees and shrubs near the bank edge were moved and replanted higher on the bank. The high intertidal area at the head of the waterway (9.9 to 13.4 feet elevation, U.S. Army Corps of Engineers datum) was planted with several saltmarsh plant species in the spring of 2005. Goose exclusion fencing was installed at the saltmarsh planting elevation to help these species establish.

1.1 Performance Criteria

The DNR is conducting habitat monitoring following completion of the remedial action, in conjunction with sediment chemical quality monitoring and physical monitoring described in the project Operations, Maintenance, and Monitoring Plan (OMMP) (Hart Crowser 2005b) to assess the long-term performance of the action. The OMMP describes performance criteria for chemical quality and

physical monitoring of the cap and thin-layer fill. Performance criteria are primarily based on the physical stability and chemical quality of the surface sediment in the two SMUs. The SMUs are also subject to annual visual inspections that are to coincide with the surface sediment sample collection for chemical analyses. Inspections document the condition and character (both biological and physical) of the surface sediment at the sampling locations.

Performance objectives for visually monitoring of the restored tideflat environment of SMUs 51a and 51b focus on qualitatively assessing benthic habitat quality and function. This assessment is based on observation of the presence or absence of infaunal and epifaunal organisms or communities at the locations where surface sediment quality samples were collected (see Figures 5 and 6 in the Monitoring Report).

For the purpose of assessing the ecological functions provided by saltmarsh or riparian/upland habitat areas, survival and areal coverage of the introduced plantings were observed and documented.

2.0 OBJECTIVES

The overall objective of the habitat monitoring is to document the condition of the restored habitats with respect to their physical stability and ecological function. A secondary objective is to determine whether any corrective actions are needed to ensure the long-term success of the restoration project.

3.0 APPROACH

Assessment of habitat condition and function relied upon qualitative and semi-quantitative measures. Specifically, observations of erosion, channelization, the depth of the apparent redox layer in the sediment, presence/absence of aquatic plants, and presence or absence of infaunal and epifaunal communities formed the basis of the Year 1 assessment for the mudflat habitat. Survival of transplanted plant material and, where appropriate, percent cover of transplants were assessed for saltmarsh and riparian/upland habitats.

3.1. Mudflat Habitat

Habitat monitoring took place on August 19 and 20, 2005, during extreme low tides. During sediment sampling at the beginning of that week (the week of August 15), Hart Crowser staked each sampling location for later habitat assessment. Sampling location descriptions on the sediment cap are presented in the Year 1 Report. Each intertidal location was revisited on August 19 for the purpose of documenting the condition of the habitat. A square meter quadrat was placed at each location and the general condition of the top few centimeters of sediments within each quadrat was noted along with any evidence of aquatic vegetation or infaunal/epifaunal organisms (e.g., tubes, fecal castings, siphon

holes). Shallow tidal pools (when present) in the vicinity of each stake were also observed for the presence/absence of flora and faunal species.

3.2. Shoreline/Upland Habitat

On August 20, 2005, the habitat condition of the saltmarsh and adjacent riparian/upland habitat was documented. Only plant survival and condition observations were recorded; percent cover was not documented due to the low survival of the transplanted material.

Photograph documentation was conducted as part of the habitat monitoring for Year 1, with selected Photographs provided in Attachment 1.

4.0 RESULTS

4.1. Mudflat Habitat

Observations were made at the 19 sediment sampling locations in SMUs 51a and 51b on August 19, as identified on Figures 5 and 6 of the Monitoring Report, respectively. Sediment characteristics ranged from consolidated sand to unconsolidated silts and fine sand. In general, the sediment surface on the mudflat was covered with a fine, hair-like algae (may be *Vaucheria* sp. or *Enteromorpha* spp.) that tended to form thin mats that trapped fine silts (Photograph 1). Initially, this alga was not visible because it looked like part of the sediment due to the silt coating. Infaunal and epifauna organisms, while tiny, seemed to be very abundant in areas covered with this fine alga. Amphipods (including *Corophium* sp.), tube-dwelling polychaetes (including many spionids), and nudibranchs were characteristic of the types of organisms present (Photograph 2).

In several locations of SMU 51b identified on Figure 6 of the Monitoring Report, there was evidence of bigger infauna based on larger burrow openings (Photograph 3). Many of these openings may be associated with a burrowing shrimp (either *Neotrypaea* sp. or *Upogebia* sp.). These species form deep (up to 1 meter), branched burrows that can rework surface and subsurface material and potentially affect the performance of the backfill and thin-layer cap. Shrimp burrowing would likely be a relatively localized effect (Photograph 4). Prominent areas included sediment sampling locations M and P.

Areas of higher elevation on the mudflat (particularly shoreline areas) seemed to be prone to impacts from debris. The head of the waterway is littered with logs, bark, plastic, and other flotsam and jetsam (Photograph 5). In some cases, the litter has damaged or smothered pickleweed in the upper intertidal environment (an example is the City mitigation area, where it has thrived) or covers large areas of the beach substrate (Photograph 6).

A single log was jammed into the outfall at the head of the waterway, but has since been removed. The outfall channel itself seemed to be in good shape and no additional channelization or erosion appears to be occurring in the vicinity of the outfall.

Additional field observations of intertidal habitat characteristics at SMUs 51a and 51b sediment sampling locations are provided in Attachment 2.

4.2. Shoreline/Upland Habitat

The high intertidal area at the head of the waterway was originally intended to be planted with pickleweed and fleshy jaumea; however, due to a misidentification by the source nursery, this latter species was apparently replaced by "brass buttons." Perennial grasses including tufted hairgrass and seashore salt grass were planted in the riparian transition zone between the intertidal area and the upland. The upland parcel due east of SMU 51a was restored by planting with various lowland trees including big leaf maple, red alder madrone, shore pine, and Hooker's willow with an understory of ocean spray and Nootka rose.

Planting densities were relatively high and followed the construction specifications, as documented by Hart Crowser in December 2004. Table 1 summarizes the plant material that was installed at the site.

Observations of the saltmarsh and riparian/upland habitats were made on August 20, 2005. Observations of the saltmarsh were simplified by the absence of almost all transplanted material. The goose-exclusion fencing seems to be ineffective in preventing herbivory since almost no pickleweed survived (Photograph 7). The suspended rope that comprises the exclusion fencing seems to act as a trap for woody debris and other flotsam/jetsam. In addition, logs have grounded on the beach and flattened the fencing (see Photograph 5). Similar conditions were also observed during a follow-up site visit by Hart Crowser on October 3, 2005, with abundant bark debris and wood stranded behind the retaining structure and strewn across the uppermost tideflat and outfall channel.

No "as-built" planting plan was available for the upland restoration area; however, observations by Hart Crowser during planting for the upland area in December 2004 and in May 2005 for the upper saltmarsh confirmed that the planting was completed at densities and elevations in accordance with project specifications. For the current monitoring effort, transects paralleling East 11th Street were walked and the plant condition was noted at each location that one of the species on the planting list (see Table 1) was identified or a distinct bark mulch circle (without a plant) was encountered. Estimates were made of how much material was dead or highly stressed versus healthy. Stressed plants were defined as having brown or dried foliage, branches that were clearly dead, or severely wilted foliage.

Table 1 - Middle Waterway DNR Restoration Site Planting List

Habitat	Plant Species	Reported Quantity Planted
Saltmarsh (Planted May, 2005)	Apparently brass buttons (*Cotula coronopifolia)* rather than Fleshy jaumea	500
	Pickleweed (*Salicornia virginica)*	500
Transition zone (bank) (Planted May 2005)	Tufted hairgrass (*Deschampsia cespitosa)*	216
	Salt grass (*Distichlis spicata)*	216
Upland (Planted December 2004)	Big leaf maple (*Acer macrophyllum)* Red alder (*Alnus rubra)* Madrone (*Arbutus menziesii)* Shore pine (*Pinus contorta)* Hooker's willow (*Salix hookeriana)* Nootka rose (*Rosa nutkana)* Oceanspray (*Holodiscus discolor)*	18 18 18 18 49 49 49

The majority of the transplanted material appeared to be missing, dead, or severely distressed (Table 2, Photographs 8 through 12). Of the species planted, shore pine and madrone had the best survival rate (94 and 88 percent, respectively). Other species that demonstrated greater than 50 percent survival included red alder, Hooker's willow, and Nootka rose. Survival rates for the perennial grasses are unclear in that they were difficult to conclusively identify during monitoring; however, few plants were present in the transition bank area between the saltmarsh and the upland area. Some erosion of bank soils appears to have occurred (soils are crumbly and loose in some areas underneath the jute), although this could not be confirmed. However, the bank appears to have stabilized near its pre-construction form (R. Moore pers. com).

Table 2 - Summary of Surviving Plant Material

Habitat	Plant Species	Quantity
Saltmarsh	Fleshy jaumea (actually brass buttons *Cotula coronopifolia)*	0
	Pickleweed (*Salicornia virginica)*	~5
Transition zone (bank)	Tufted hairgrass (*Deschampsia cespitosa)*	~0?
	Salt grass (*Distichlis spicata)*	~0?
Upland	Big leaf maple (*Acer macrophyllum)* Red alder (*Alnus rubra)* Madrone (*Arbutus menziesii)* Shore pine (*Pinus contorta)* Hooker's willow (*Salix hookeriana)* Nootka rose (*Rosa nutkana)* Oceanspray (*Holodiscus discolor)*	~2 ~14 ~16 ~17 ~33 ~30 ~15

The hydraulic dredge pipe from the Thea Foss Waterway to the St. Paul Waterway placed along the East 11th Street boundary of the upland restoration site appears to have contributed to some of the mortality observed, in that there was a row of six or seven bark mulch circles underneath the pipe, but no plants.

Irrigation piping was evident in the main part of the restoration area, but it was unclear whether regular watering of the restoration area had been done, based on the poor condition of many of the plant. Soils in the restoration area appeared to have formed a crust or hard pan that may have made it difficult for water to penetrate, if irrigation had been done.

The majority of the material planted along the front face of the berm abutting the adjacent Simpson property to the east did not survive (irrigation was not available in this area and water retention chemicals added to the soil did not appear sufficient to ensure survival).

Weeds (dandelion, vetch, pineapple plant, horsetail, dock, etc.) and invasive plants (butterfly bush, tansy, scots broom, and blackberry) were in early colonization (present but without significant coverage). Additional weed growth was noted during the October 3, 2005, site visit by Hart Crowser.

5.0 SUMMARY

Overall, near-surface sediments comprising the SMU 51a backfill and SMU 51b thin-layer cap appear to be in the initial stage of recolonization. Infaunal and epifaunal communities that are adapted to disturbed or newly created habitat appear to be thriving. Diatoms and small filamentous algae are well developed on the sediment surface and appear to contribute significantly to the productivity of the mudflat surface.

The saltmarsh plant community is nonexistent, except for a small patch of pickleweed and sandspurry (*Spergularia* spp.) adjacent to the City outfall. The pickleweed may have survived from the initial planting; however, the sandspurry are volunteers.

The perennial grasses that were transplanted in the shoreline area that transitions between the saltmarsh and the upland area are also absent. There may have been a few survivors, but identification could not be confirmed. Bank erosion may have contributed to the low survival.

The upland plantings also experienced a low survival rate. The dredge pipe for transport of sediments from the Thea Foss Waterway to the St. Paul Confined Disposal Facility was placed along the edge of the habitat restoration area and appears to have killed the plantings along the eastern edge of the parcel. Elsewhere in the site, low survivorship appears to have been a function of low

rainfall and little or no irrigation (plants appear to have initially grown and leafed out in that they look larger than a typical 1- or 2-gallon plant size, but are now dried or shriveled).

6.0 RECOMMENDATIONS

The following recommendations are provided as potential corrective actions that may contribute to the long-term success of the mudflat, saltmarsh, and riparian/upland habitats.

- Confirm the presence and density of burrowing shrimp on the mudflat during follow-up monitoring events.
- Replace dead or severely compromised trees and shrubs in the upland area.
- Provide regular watering until the plants are well established (include at least one summer of regular watering)
- Coordinate invasive species control with adjacent restoration projects.
- Continue to monitor erosion-prone areas along the shoreline and consider more aggressive bank erosion control, if necessary (i.e., has not stabilized).

Reestablishing the upper intertidal plantings will be difficult without additional protection of the area from floating logs and other debris. Log-structures anchored parallel to the beach face near 9 feet elevation might provide some additional protection from larger debris, but bark and smaller floating material could still be transported into the upper intertidal zone at high tide. Floating boom-type barriers might also be effective but would require further evaluation regarding anchorage and installation, maintenance, potential effects to habitat, and related land-use issues. More aggressive removal of transient logs and wood debris would also help. Even with these measures, it is uncertain whether a stable plant community could be established in the upper intertidal environment.

7.0 REFERENCES

Hart Crowser 2005a. Remedial Action Construction Report, Middle Waterway Problem Area C, Sediment Management Units 51a and 51b, Commencement Bay Nearshore/Tideflats Superfund Site, Tacoma Washington. Prepared for the DNR, Contract No. AE 099, 7946-01, April 7, 2005.

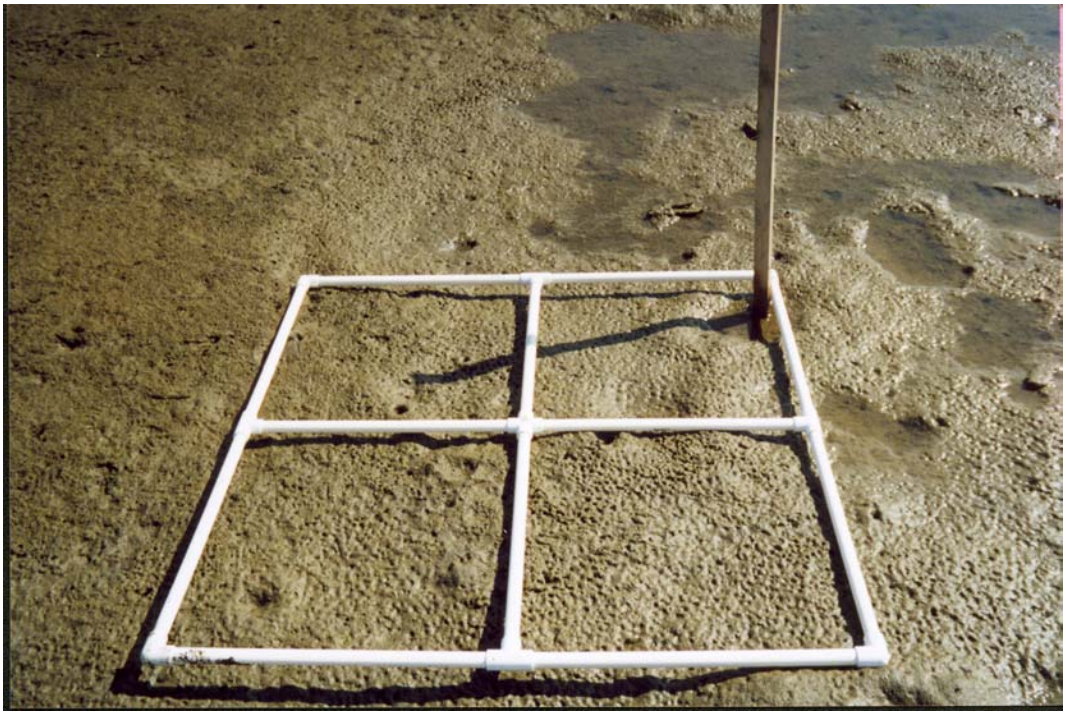
Hart Crowser 2005b. Operations, Monitoring, and Maintenance Plan, Middle Waterway Problem Area C, Sediment Management Units 51a and 51b, Commencement Bay Nearshore/Tideflats Superfund Site, Tacoma Washington. Prepared for the DNR, Contract No. AE 099, 7946-01, April 27, 2005.

Moore, R., 2005, Personal communication with Nancy Musgrove, MER Consulting. October 12, 2005.

J:\jobs\794602\Appendix D.doc

ATTACHMENT 1
SITE PHOTOGRAPHS

Photograph 1 - Silt-covered algal mats near location P.



Photograph 2 - Evidence of infaunal/epifaunal burrows and tubes.

Photograph 3 - Observation of larger infaunal burrows or tubes.

Photograph 4 - Area with higher density of burrowing organisms.

Photograph 5 - Debris and log damage to goose exclusion fence.

Photograph 6 - Silt-covered algal mats.

Photograph 7 - Limited pickleweed survival near location A-2.

Photograph 8 - View northwest adjacent to pipeline along East 11th Street.

Photograph 9 - Stressed Nootka rose.

Photograph 10 - Dead Hooker's willow.

Photograph 11 - Missing plant in dark mulch circle.

Photograph 12 - Stressed big leaf maple. ←Up

ATTACHMENT 2
INTERTIDAL HABITAT OBSERVATIONS

ATTACHMENT 2
INTERTIDAL HABITAT OBSERVATIONS

Location[a]	Observations
A-2	Highest elevation of all locations surveyed. Woody/plastic debris covering high percentage of surface. Some pickleweed in one corner; mostly sandspurry. This was the only location pickleweed was noted in the area.
AB	Silt layer at surface with anoxic layer beneath. Woody debris. Logs scattered along shoreline.
B-2	Silt underlain by very firm sediment. Some diatoms at surface, along with hair-like algae (may be *Vaucheria* or *Enteromorpha*). Woody debris, leaf litter present on surface.
CD	Very soft sediments. Adjacent to channel. Surface appears bare (sediments dewatered more than elsewhere?) Still good evidence of burrows and other openings in sediment. Very thin anoxic layer below surface.
E	Adjacent to tidal channel. Sediments soft (sink at least a foot). Anoxic layer immediately beneath surface. Corophium amphipods present. Many burrows/openings in sediment.
F-1/F-2	Soft sediment (to a least 1 foot depth). Brown silt with black, anoxic layer beneath. Hair-like algae (*Enteromorpha or Vaucheria*?) present at surface. Many tube/burrow openings.
G	Sediments very soft. Light brown silt at surface. Filamentous algae not evident. Surface pockmarked with tube openings (may be amphipod or worm).
HI	Sediments very soft. Filamentous algae not evident. Sediment surface marked by many small burrow openings.
J	Adjacent to backwater area. No evidence of trapped fish. Some bird loafing/foraging sign.
K	Among piling. Hairlike algae (*Enteromorpha or Vaucheria*?) present at surface. Coated with a few mm of silt. Some *Ulva* (algae) present.
L	Entrance to City mitigation site. Sediments extremely unconsolidated! Brown silt at surface, underlain by anoxic sediments, then oxic below that. Sediments pockmarked with burrows. Some sheen present in footprints at base of riprap (SE corner of Mylet parking area). Racoon prints along shoreline.
M	Light silt at surface. Little evidence of diatoms or algae. Surface pockmarked with openings. Adjacent area appears to have high density of ghost or mud shrimp burrows.
N	*Ulva* (algae) present. Some sheen on sediment surface. No evidence of anoxic layer. Channel forming. Surface sediment has many openings.

Location[a]	Observations
O	Very thin silt layer with hair-like algae matting surface. Some anoxic sediments immediately below algae. Top few mm of sediment very productive-many tiny infauna/epifauna. Shore crab shell present. Clam or mudshrimp burrow openings evident. Some local channelization present in mudflat.
P	Sandy surface covered by hair-like algae that has warped into 3-dimensional surface. Silt trapped in algae mat. No or only localized anoxic (black) sediments. If present, at least 6 inches below surface. Shell (*Macoma* sp.) present on sediment. "Petroleum" sheen observed in pools at base of adjacent riprap. May be bacterial? Storm drain off of east end of building is eroding a shallow channel in the mudflat. Ghost/mud shrimp burrows fairly dense along side of erosional channel.
Q	Sandy, firm sediment at higher elevation on mudflat. Filamentous algae coated with diatom has dried on sediment surface. Corophium amphipods present. *Ulva* present in area.
R	Strong solvent odor from upwind facility (not in sediment). Surface silt layer only a mm thick. Filamentous algae prevalent. Forms mats, particularly apparent in ponded tidal water. A number of polychaetes (particularly spionids) and amphipod species are present as evidenced by organisms or their fecal castings. Tiny saccoglossan nudibranchs found in filamentous algae. Mud or ghost shrimp may be present based on burrow openings observed. Golden brown diatom coating on filamentous algae. There is evidence of bird foraging/loafing in the area.
S	Fine brown silt surface layer < 1 cm thick. Gray layer immediately underneath (some black areas). Golden brown diatom layer coating surface of filaments of tiny hairlike algae. Surface pockmarked with worm tubes. Small mounds with fecal castings adjacent to quadrat. Ponded tidal water adjacent to quadrat very active with foraging amphipods, spionid polychaetes, nematodes, and other tube-dwelling polychaetes. The few cobbles present on the surface are encrusted with barnacles and mussels. There is evidence of bird foraging/loafing in the area.

a Habitat observations were made at locations where sediment was collected for chemical analysis as part of backfill and thin-layer cap performance monitoring (see Monitoring Report for additional sediment sample location information)