2005 Cuyahoga River and Nearshore Lake Erie Fish Tissue Study

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Cleveland Metroparks
Cuyahoga Valley National Park
Northeast Ohio Regional Sewer District
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EXECUTIVE SUMMARY

In 2005, a study was completed to determine current concentrations of mercury, selenium, PCBs, and pesticides in fish tissue samples from the Cuyahoga River and nearshore Lake Erie. These contaminants were chosen due to their historical significance, their ability to bioaccumulate in fish, and/or because of possible water quality criteria that may be adopted.

Fish were collected from eight sites in the Cuyahoga River, five sites in Lake Erie, and one site in the Chagrin River using boat and longline electrofishing methods. Composite fillet samples were collected to represent potential health impacts to humans who consume contaminated fish. Whole-body samples were collected to represent potential impacts to piscivorous wildlife and to apply certain standards that are applicable to whole-body samples. The results were compared to those from a study from 1989-1992 to determine if any changes in fish contaminant levels have occurred since that time. The results were also compared to applicable federal and state standards to evaluate potential ecological or human health risks.

Generally, total PCB and lipid-normalized PCB concentrations measured in composite fish fillets showed higher concentrations at Cuyahoga River and Lake Erie Area of Concern sites than at reference sites located outside the Area of Concern. A historical comparison revealed that PCB concentrations were generally much lower in 2005 than in the 1989-1992 study.

For mercury, there was a general increase in the concentrations at most of the locations that were sampled, with fillet samples from Lake Erie having generally higher concentrations than those from the Cuyahoga River. This trend was not observed for whole-body mercury samples, as there appeared to be no significant differences among the river and lake AOC and reference sites. Although none of the Cuyahoga River sites had median fillet mercury concentrations exceeding the U.S. EPA human health criterion for methylmercury, several Lake Erie sites had median fillet mercury concentrations exceeding this value. At many of the sites, on both the river and the lake, whole-body mercury concentrations exceeded fish tissue values based on the Great Lakes Initiative wildlife criterion.

Finally, whole-body fish at all of the sites had average selenium concentrations that were lower than a draft U.S. EPA aquatic life water quality criterion. Most of the sites also had average selenium concentrations below a draft winter monitoring trigger. The greatest selenium concentrations occurred at the Cuyahoga River reference site.

It is recommended that continued monitoring is needed to further track changes in local levels of fish tissue contaminants and to evaluate the effectiveness of ongoing programs to control their sources.

INTRODUCTION

The lower Cuyahoga River and part of the Lake Erie shoreline near the Cuyahoga River have been designated as one of 42 Great Lakes Areas of Concern (AOC) by the International Joint Commission (IJC). They are defined by the U.S.-Canada Great Lakes Water Quality Agreement (Annex 2 of the 1987 Protocol) as "geographic areas that fail to meet the general or specific objectives of the agreement where such failure has caused or is likely to cause impairment of beneficial use...". One of the beneficial use impairments for the Cuyahoga River is restrictions on fish consumption. The Cuyahoga River receives effluent from industrial and municipal discharges in addition to overflows from combined sanitary and storm sewers. Two of the largest municipal dischargers are the Northeast Ohio Regional Sewer District's (NEORSD) Southerly Wastewater Treatment Center (WWTC) and the City of Akron Wastewater Treatment Plant (WWTP). The river also receives pollutants from nonpoint sources such as agricultural, suburban and urban runoff, sediments, and atmospheric deposition. Fish and other organisms that are living in the river and nearshore Lake Erie can be exposed to contaminants found in discharges, overflows, runoff, and sediments and accumulate them in their bodies. This can potentially cause health-related problems for humans and wildlife that eat the fish and are thus exposed to these contaminants.

In a previous study completed by NEORSD, the City of Akron, the Cuyahoga County Board of Health, the Cuyahoga Valley National Recreation Area, the Ohio Department of Health, the Ohio Department of Natural Resources, the Ohio Environmental Protection Agency, and the United States Fish and Wildlife Service in support of the Cuyahoga River Remedial Action Plan, fish tissue samples from within the Cuyahoga River Area of Concern (AOC) and at reference locations were collected to determine the types and concentrations of compounds that had accumulated in the edible portions of those fish. The collections were made from 1989 to 1992 at six Cuyahoga River sites from river mile (RM) 63.3 to RM 10.0 and at one Chagrin River site at RM 5.1. Collections were also made at five Lake Erie nearshore sites between Lakewood and Eastlake. A total of 95 composite samples from 370 fish were analyzed including 9 quality assurance/quality control samples. The analyses included 68 samples from within the AOC.

Of the 130 priority pollutants analyzed in fish fillets collected for the study, 27 chemical contaminants were detected. These contaminants included 3 polychlorinated biphenyl (PCB) mixtures, 11 pesticide compounds, 7 volatile organic compounds, and 6 heavy metals. Of these chemicals, only total PCB concentrations exceeded or approached the applicable U.S. Food & Drug Administration (FDA) Action Levels in any of the samples. PCBs were detected in 77 of the 86 samples, including samples from the reference sites. Sources of PCBs have included capacitors, transformers, and other electrical equipment (U.S. EPA 1992).

Another high-profile fish tissue contaminant found in this earlier study was mercury. This highly bioaccumulative metal was detected in all of the samples. Sources of mercury include the earth's crust, fossil fuel combustion, industries, dental facilities, hospitals, and many others. Most mercury found in local waterways is attributable to atmospheric deposition.

In March of 1994, the Ohio Department of Health (ODH) issued a fish consumption advisory for PCBs and mercury for portions of the Cuyahoga River based largely upon the information from this study. Although an ODH consumption advisory was already in place for Lake Erie, this was the first consumption advisory for the Cuyahoga River. This advisory, which remains in effect today, places restrictions on brown bullhead, yellow bullhead, white sucker, and common carp in the river. Fish species in Lake Erie that have a consumption advisory include channel catfish, Chinook salmon, coho salmon, common carp, freshwater drum, smallmouth bass, steelhead trout, walleye, white bass, whitefish, and white perch.

The purpose of the current study was to conduct sampling and analysis to determine current concentrations of mercury, selenium, PCBs, and pesticides in the tissues of fish living in the Cuyahoga River and nearshore Lake Erie AOC. These contaminants were chosen due to their historical significance, their ability to bioaccumulate in fish, and/or because of possible water quality criteria that may be adopted by the U.S. EPA. Two types of fish samples were collected during the study. Fillet samples were collected to represent potential impacts to humans who consume contaminated fish. Whole-body samples were collected to represent potential impacts to piscivorous wildlife and to apply certain standards that are applicable to whole-body samples. The results were compared to those from the 1989-1992 study to determine if any changes in fish contaminant levels have occurred since that time. The results were also compared to applicable federal and state standards to evaluate potential ecological or human health risks.

METHODS

In the late summer and early autumn of 2005, fish were collected from fifteen sites in the Cuyahoga River, the Chagrin River and nearshore Lake Erie. These sites were selected because they included heavily fished areas, areas of known pollution sources, areas that show degradation or recovery, background stations, and reference locations. For the most part, sampling locations duplicated the sites used in the 1989-1992 study and are detailed in Appendix A. One additional site was added in the Cuyahoga River navigation channel. The Cuyahoga River sites from RM 54.1 to RM 1.2 and the Lake Erie sites within the Cleveland Harbor and off Wildwood Park are located within the AOC. The Cuyahoga River site at RM 63.3, the Lake Erie sites off Lakewood and

Eastlake, and the Chagrin River site are located outside the AOC. A map showing the locations of the collection sites is attached as Appendix B.

Two types of samples were collected during this study: composite and whole body. The fillet samples were composites of three to five fish fillets of the same species and size class. Fish were considered to be of the same size class if the minimum and the maximum lengths of individual fish did not vary by more than 10%. Whenever possible, two bottom-feeding species and two sport species were collected at each station. Bottom-feeding species included carp, catfish species, and sucker species. Sport fish were defined as those fish that are commonly sought by anglers and included smallmouth and largemouth bass, members of the sunfish family, white and black crappie, walleye, sauger, northern pike, yellow perch, white bass, white perch, and freshwater drum. The bottom-dwellers represented worst-case risk through human consumption for certain pollutants, and the sport fish represented most likely human consumption. The largest size classes from each species found at a site were used to also represent worst-case risk.

The whole-body samples consisted of up to 12 individuals of a sport species belonging to the same size class. These samples were collected at all sites. In addition, up to 12 individuals of bluegill or other sunfish species were collected at Shalersville, the Cuyahoga River at Southwest Interceptor, and the Lake Erie West Harbor site. These samples were used for selenium analyses. The additional bluegill or sunfish were collected in order to make comparisons with results from research conducted in the development of draft water quality criteria.

All fish collections were made from August 15 until October 17, 2005. The primary method of collection was with either a boat-mounted electrofishing unit (Figure 1) or longline electrofishing equipment (Figure 2) based upon standardized Ohio EPA methods (Ohio EPA, Biological Criteria for the Protection of Aquatic Life: Volume II: Users Manual for Biological Assessment of Ohio Surface Waters, 1988). At one site (FTCS-12), fish were collected using a rod and reel because electrofishing did not produce the desired sample. All fish shocked at a site were collected and placed in a live well for processing. Precautions were taken to keep all of the fish alive and to release unharmed those fish not used as a sample. All fish collected were kept in the live well until the fish to be prepared as samples were selected, to prevent them from being shocked more than once. Care was taken to prevent the fish from coming into contact with oil, plastic, sediment, etc. that could contaminate the tissue samples. The fish were weighed to the nearest gram, and a measurement to the nearest millimeter of the total length was taken (Figure 3).


Figure 1. Boat Electrofishing

Figure 2. Longline Electrofishing

Figure 3. Fish Measurement

A sample information form, including the type of collection device, names of samplers, notes concerning any unusual event or discharges, and a brief description of the weather, along with individual records of each fish retained for analysis with information on species, weight, length, and notations of physical deformities or parasites, was completed for each site. The presence of other fish collected during the sampling effort, but not prepared as samples, was also recorded. Completed forms for each site are located in Appendix D.

The fish were then wrapped in aluminum foil and put into a plastic bag. Whole-body samples were put into a cooler filled with dry ice. The coolers were washed with hot water and 10% nitric acid and rinsed with de-ionized water prior to use. Samples to be filleted were put into a cooler filled with regular ice. All samples were then transported to the NEORSD Environmental & Maintenance Services Center in Cuyahoga Heights for processing.

In order to determine the age of the fish, dorsal spines, scales or pectoral spines (for catfish) were collected from each fish used as a sample. The largest dorsal spine was clipped at the base, and scales are collected from the left side of the fish between the

lateral line and the dorsal insertion. Catfish pectoral spines were rotated and removed from their joint. The scales and/or spines were placed in paper envelopes with date, sample code and species information. They were then sent to the Ohio Department of Natural Resources Division of Wildlife office in Akron for aging.

The fish for the composite samples were scaled and filleted at the NEORSD Environmental & Maintenance Services Center (EMSC) in order to reduce possible contamination in the field (Figures 4 & 5). The fish were placed upon an aluminum foil-lined cutting board with the dull side towards the fish. The aluminum foil was changed between each species prepared for each site. Fillets were prepared as illustrated in Appendix E. The skin was removed for channel catfish, bullheads, carp, and suckers and left on for all other species. This was done to mimic anglers' worst-case likely preparation of their catch prior to consumption. The fillets for each species were combined into one composite sample. Fish collected as whole-body samples were kept as individuals instead of making a composite sample.

Figure 4. Scaling

Figure 5. Filleting

Larger composite and whole-body samples were cut into chunks using a butcher saw and meat cleaver (Figure 6). The chunks were put through a meat grinder with dry ice to keep the samples cold (Figure 7). The grinder and all tools used during grinding were washed with soap and water between each sample.

Smaller samples and the ground large samples were then processed in a commercial grade stainless steel blender (Figure 8). Enough dry ice was added to the blender to ensure that the entire sample was frozen and no moisture was visible (Figure 9). The resulting powder was thoroughly mixed by hand and divided between two or three 125mL glass jars with Teflon lids and labeled with date, sample code and species. The remaining sample was discarded. The blender and all tools used during blending were washed with soap and water between each sample.

Figure 6. Chunking


Figure 7. Grinding


Figure 8. Blending


Figure 9. Powdered Fish Sample

All processed samples were placed in a freezer at -37°C (Figure 10) for storage prior to analysis. It should be noted that, on 10/18/05 at 1600 hours, the freezer containing the processed samples was inadvertently turned off for approximately twenty-three hours. During this time, the temperature in the freezer warmed from –37ºC to -6ºC. The samples remained frozen and no condensation was present, therefore it was assumed that no significant changes occurred to them during this time period.

NEORSD Analytical Services analyzed fish fillet and whole-body samples for mercury and selenium. EPA Method 245.2 was used for the analysis of mercury. Selenium was analyzed using EPA Method 200.7.

Severn Trent Laboratory (STL) in North Canton analyzed the fish fillet samples for percent lipids (method SW846 8290), PCBs (method SW846 8082), and pesticides (method SW846 8081A). A description of methods used by STL, including QA/QC information, and results are given in Appendix F.

Figure 10. Freezer with fish tissue samples

RESULTS & DISCUSSION

A total of 45 composite samples from 149 fish, 118 whole-body samples from individual fish, and 30 quality assurance/quality control samples were analyzed during this project. A list of species analyzed is given in Appendix C. Results obtained from analysis of these fish are discussed below and shown in Appendices D and F. Due to the limited number of samples collected for each species, none of the observations discussed have been tested for statistical significance.

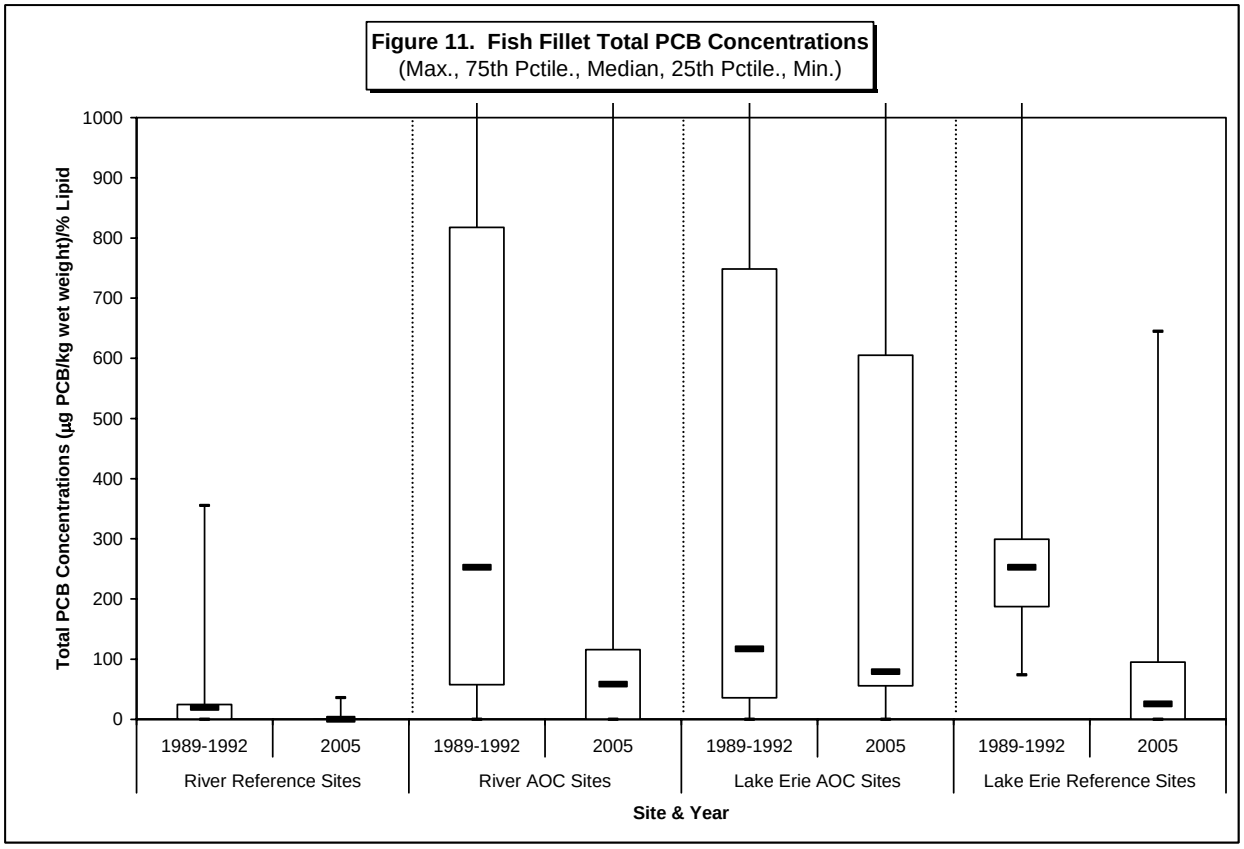
PCBS

A total of 42 composite fillet and 5 whole-body individual fish samples were analyzed for PCB concentrations by STL North Canton. At least one former commercial mixture of PCBs (Aroclor) was detected in 26 of the composite and each of the whole-body samples. The three mixtures that were detected in the samples were Aroclor 1248, Aroclor 1254, and Aroclor 1260.

Total PCBs

The composite fillet total PCB results for the Cuyahoga River and Lake Erie AOC, determined by summing individual Aroclor concentrations, were compared to their respective reference sites and to each other (Figure 11). As seen from this graph, the total PCB concentrations at the Lake Erie AOC sites were generally higher than at the other three types of sites. The river reference sites had the lowest levels, with only one sample having a detected total PCB concentration. When comparing the current study to the 1989-1992 results, there was a consistent decline in total PCB concentrations at all four

types of sites. This was especially true for the lake reference and river AOC sites. For the latter, the median of the 2005 levels was less than half of the median of the1989-1992 levels. These reductions are consistent with an overall reduction in PCBs in the environment since the U.S. EPA banned their production-based discharge in 1977 and their manufacturing, processing, and distribution in commerce in 1979 (U.S. EPA 1992).

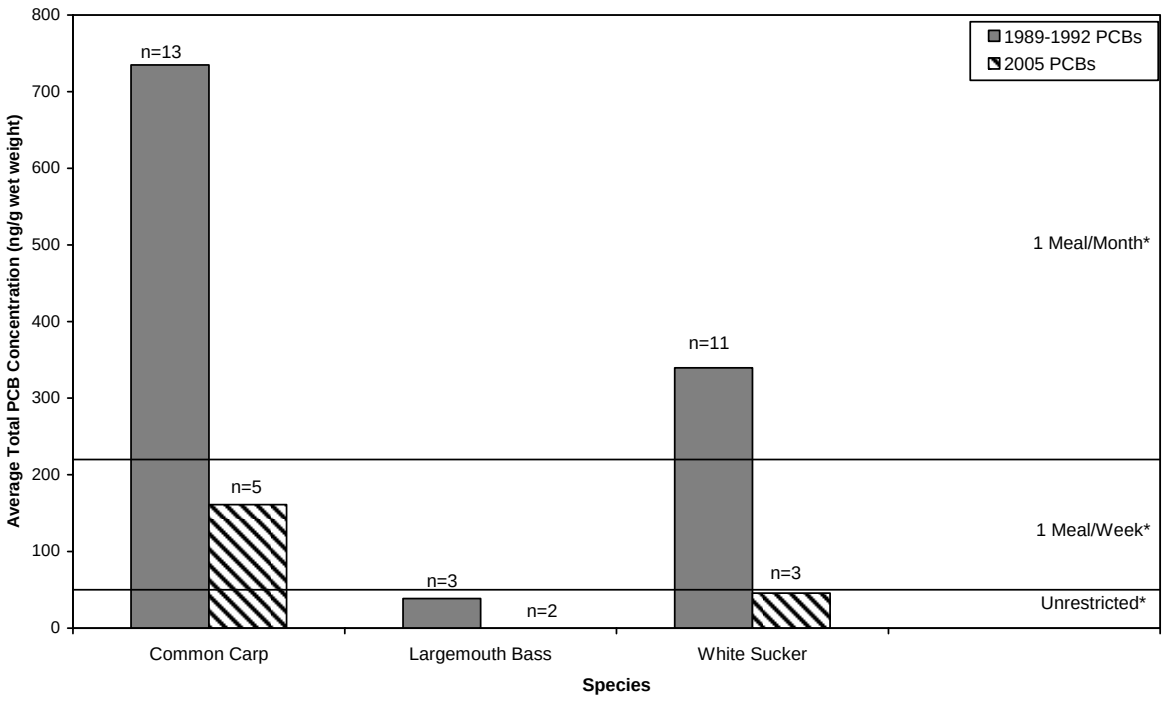


In September 1993, the Great Lakes Sport Fish Advisory Task Force released the *Protocol for a Uniform Great Lakes Sport Fish Consumption Advisory*. This document proposed categories based upon a health protection value of $5x10^{-5}$ mg/kg/day PCB residue in sport fish. The health protection value takes into account available toxicological and epidemiological data, with an emphasis on adverse reproductive and neuro-developmental effects. A modified version of this protocol was used as the basis for the State of Ohio Fish Consumption Advisory Program. The PCB concentrations from the current study were compared to the categories recommended by that program solely to evaluate whether any changes may have occurred since the advisory was adopted in 1994. These comparisons should not be interpreted as an update to the State of Ohio advisory, since a more extensive data set may be needed before advisory changes can be made.

Figure 12 shows the average composite fillet total PCB concentration in the Cuyahoga River AOC for three species that were collected in both the 1989-1992 and

2005 studies. For all three species, common carp, largemouth bass, and white sucker, the average concentration declined between the two studies. The largest decrease was for common carp, although the current PCB concentration in the largemouth bass was lower than the detection limit. When comparing these concentrations to the fish consumption advisory categories developed by the Great Lakes Sport Fish Advisory Task Force (1993), largemouth bass and white sucker would fall under the "unrestricted" category, while common carp would be in the "1 meal per week" category. For both common carp and white sucker, these concentrations fall into a less restrictive category than in the previous study. Currently, the Ohio Department of Health has in effect a consumption advisory for white suckers in the Cuyahoga River depending on the location. From the Ohio Edison dam pool to Bath Road, white suckers of all sizes should not be eaten more than once per month. From Bath Road to the mouth of the river, those that are greater than 11 inches should not be eaten more than once per month.

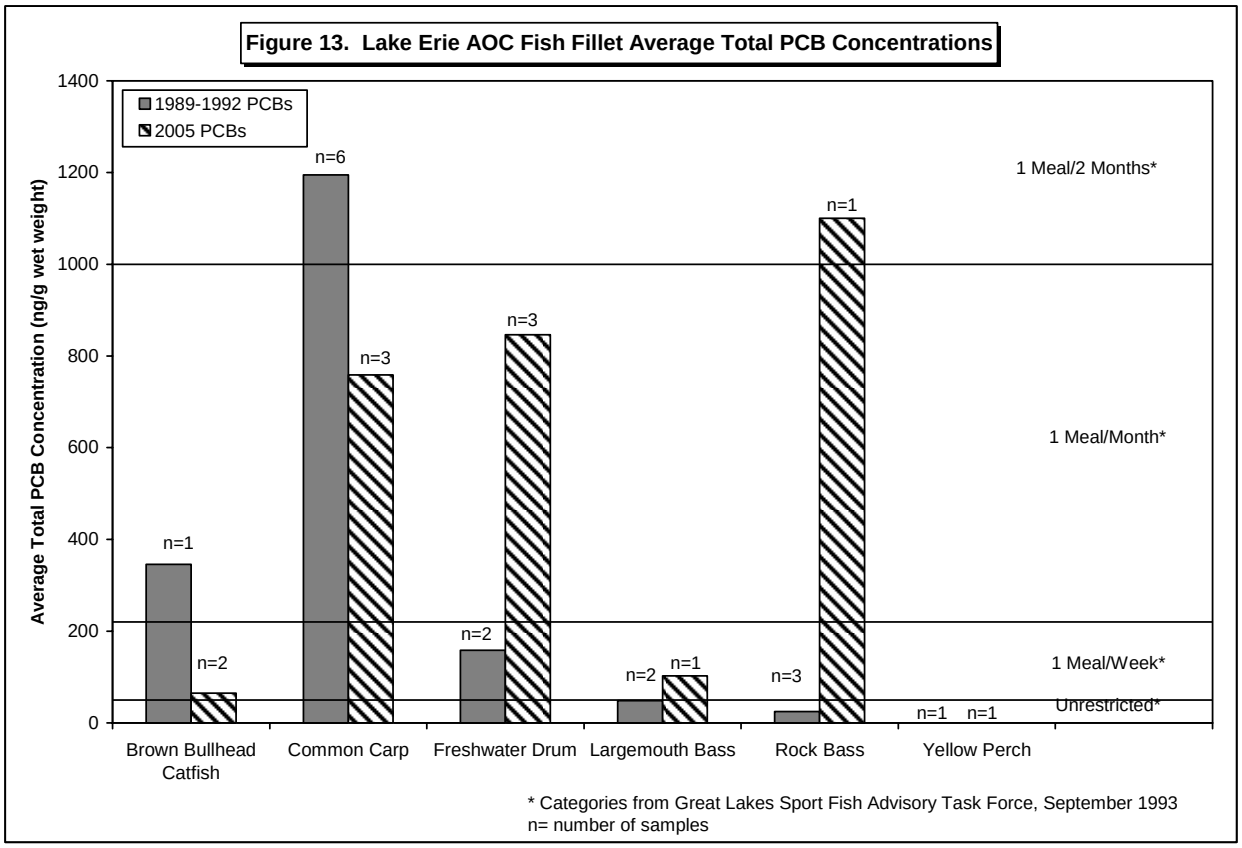
Figure 12. Cuyahoga River AOC Fish Fillet Average Total PCB Concentrations



* Categories from Great Lakes Sport Fish Advisory Task Force, September 1993
n= number of samples

In Lake Erie, many species have consumption advisories in effect due to PCBs. For most of these, the recommended eating frequency is no more than one meal per month. Of the six species collected in both the 1989-1992 and 2005 studies in the AOC, only yellow perch had an average total PCB concentration that fell into the "unrestricted" category in both studies (Figure 13). In 2005, brown bullhead catfish and largemouth bass had average concentrations in the "1 meal per week" category, common carp and

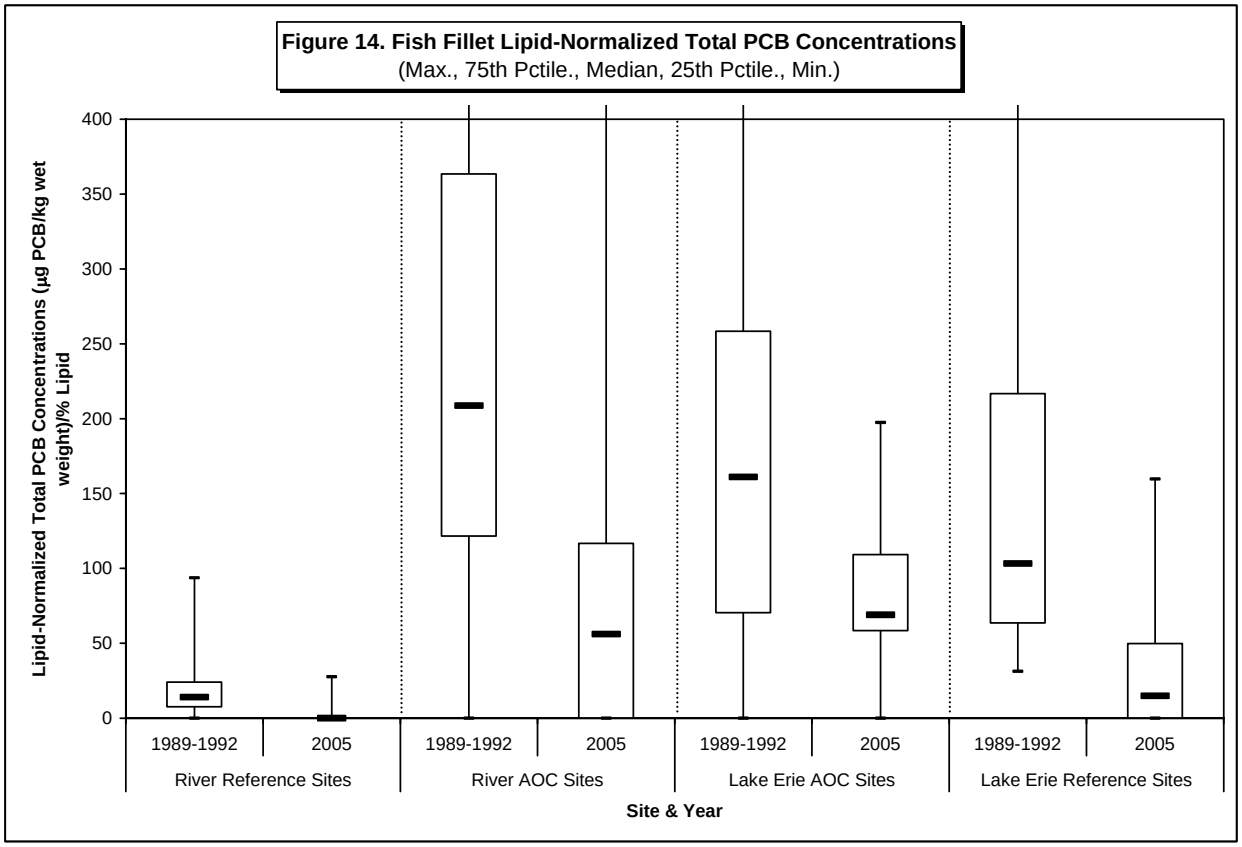
freshwater drum in the "1 meal per month" category, and rock bass in the "1 meal per 2 months" category. The total PCB concentrations in brown bullhead catfish and common carp decreased between the two studies enough that they would fall into a less restrictive meal consumption category. For freshwater drum, largemouth bass, and rock bass, the total PCB concentrations increased from the 1989-1992 to 2005 studies and was great enough that they would be in a more restrictive category. However, this was most likely the result of sampling fish that had higher lipid contents, as can be seen in the following discussion of lipid-normalized PCB concentrations, and not due to the presence of more PCBs in the lake.



Lipid-Normalized PCBs

In federal guidance on the development of water quality criteria for the protection of human health, an organism's ability to bioaccumulate lipophilic organic chemicals is assumed to be proportional to its lipid content (U.S. EPA, 1993). Furthermore, lipid content is a better general predictor of fish PCB levels than body size (Rasmussen et al., 1990). Since PCBs are lipophilic and lipid content varies between fish species and between individuals, lipid normalization is necessary to characterize relative site contamination by PCBs.

Figure 14 presents a comparison of the fillet lipid-normalized PCB concentrations for the Cuyahoga River and Lake Erie AOC and reference sites. The concentrations at the reference sites were generally lower than at the AOC sites. When comparing the current results to the 1989-1992 study, there was a consistent decline in lipid-normalized PCB concentrations. The greatest decrease occurred in the river AOC sites, which had the highest concentrations in the past study.



A site-to-site and historical comparison of lipid-normalized PCB concentrations at the river sites was also completed (Figure 15). As indicated by the figure, the two river reference sites had lower concentrations than all of the Cuyahoga River AOC sites. Within the AOC, RM 21.0 generally had the lowest concentrations, with the other sites at similar levels. What can also be seen is that, since the last study, PCB concentrations have generally decreased at all of the sites. This same trend can also be seen at the Lake Erie sites (Figure 16). The greatest general decreases occurred at the two Cleveland Harbor locations, although these still had the highest concentrations. The location near Wildwood Park had a lower median concentration than the reference site near Lakewood, indicating that fish tissue contamination by PCBs is not limited to just the AOC.

Figure 15. Cuyahoga River and Chagrin River Fish Fillet Lipid-Normalized Total PCB Concentrations
(Max., 75th Pctile., Median, 25th Pctile., Min.)

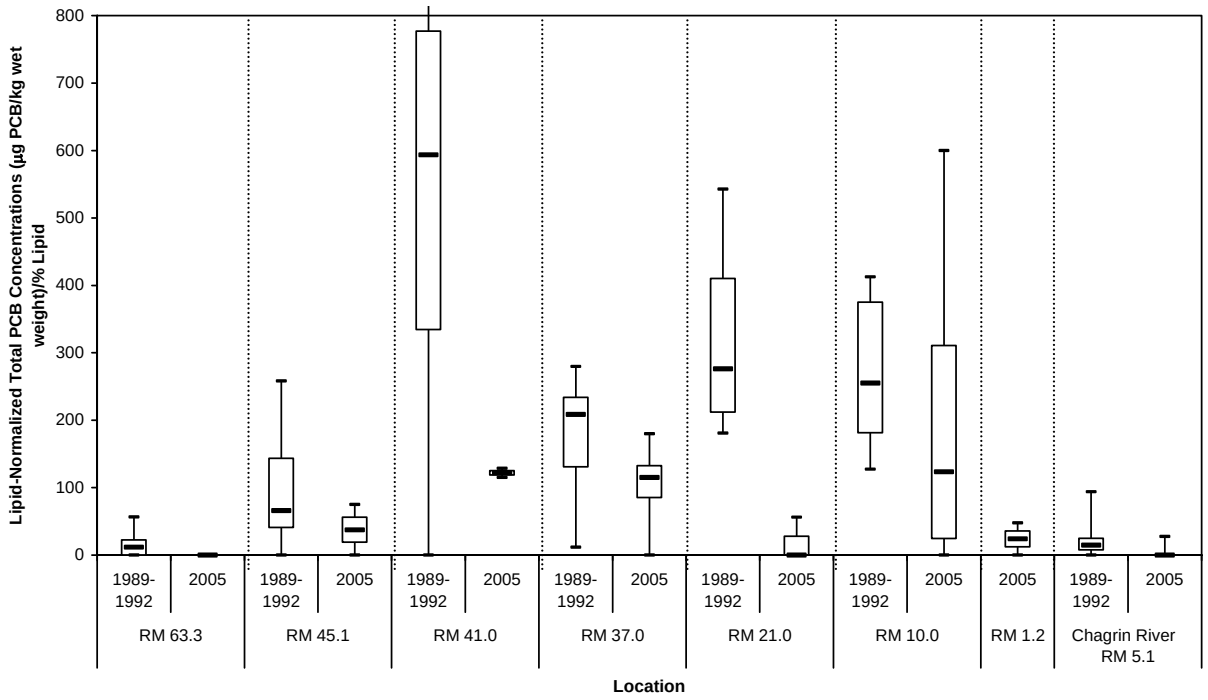
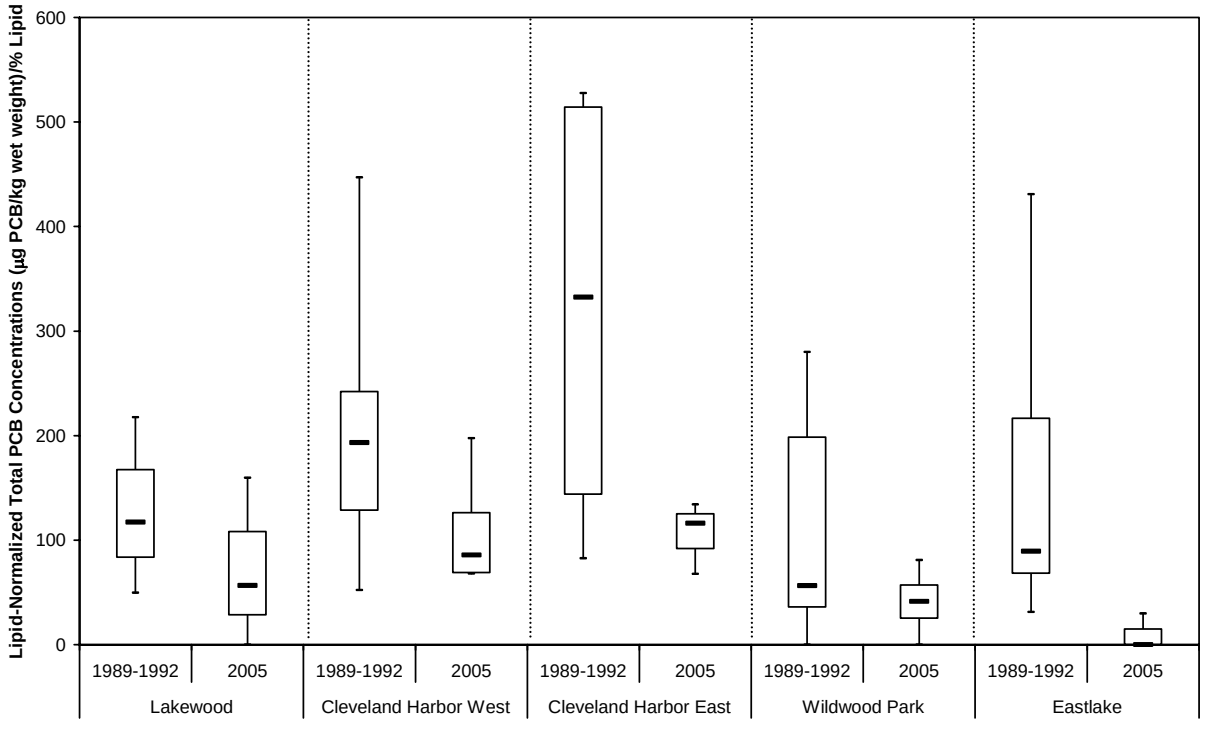
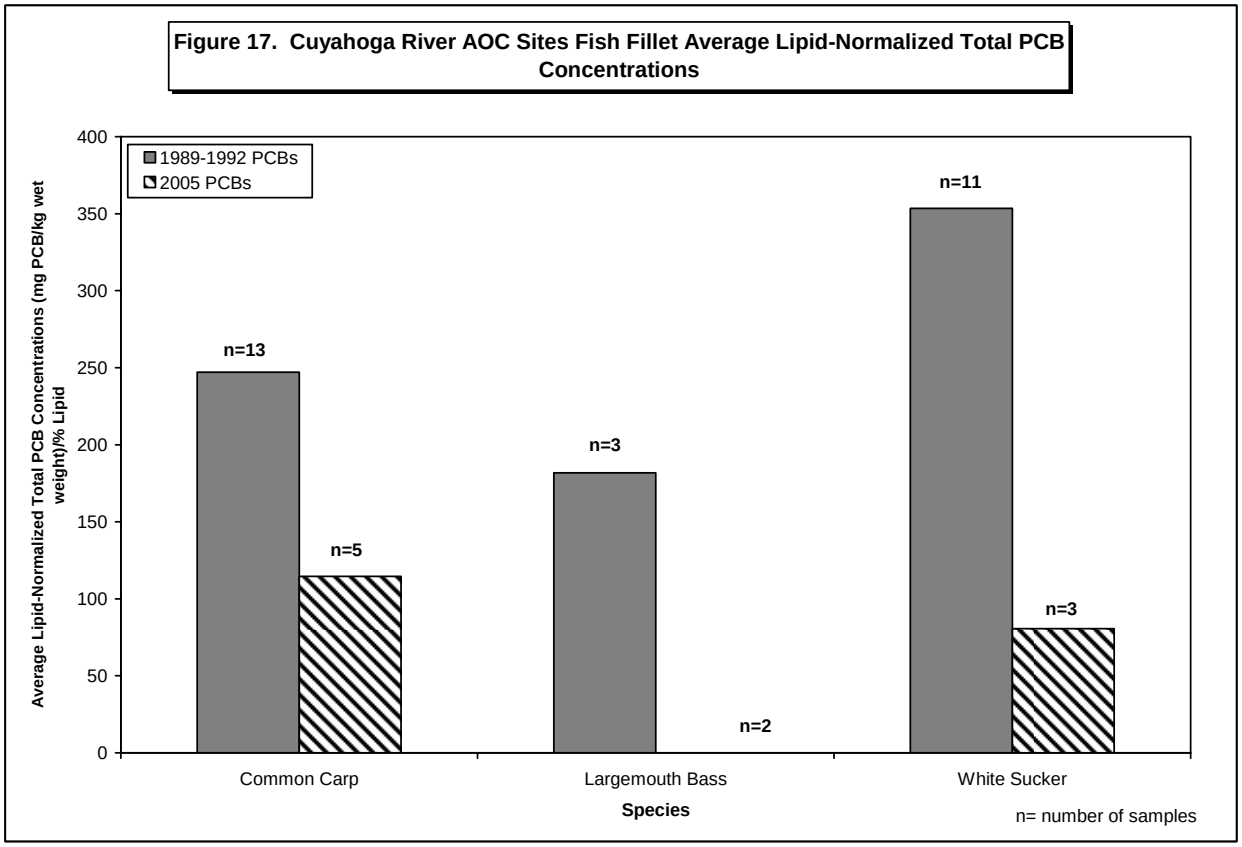


Figure 16. Lake Erie Fish Fillet Lipid-Normalized Total PCB Concentrations
(Max., 75th Pctile., Median, 25th Pctile., Min.)



Figures 17 and 18 show a historical comparison of the lipid-normalized PCB concentrations for species at the Cuyahoga River and Lake Erie AOC sites. For each of the three species in the river and each of five of the species in the lake, there was a decrease in average PCB concentrations from 1989-1992 to 2005. Yellow perch, with no detectable PCB concentrations in both studies, was the only species for which a decline was not evident.



A comparison was also made between common carp upstream and downstream of Southerly WWTC (Figure 19). A similar comparison could not be made upstream and downstream of the Akron WWTP due to the limited number of common carp samples that were collected there. In the 1989-1992 study, the lipid-normalized PCB concentrations were approximately the same upstream (RM 45.1, 37.0 & 21.0) and downstream of the Southerly WWTC (RM 10.0 & 1.2). In 2005, the concentrations were generally slightly higher downstream. This could be due to higher levels of urbanization and legacy contamination in the lower reaches of the river, but the difference was so slight that its statistical significance is doubtful.

Figure 18. Lake Erie AOC Fish Fillet Average Lipid-Normalized Total PCB Concentrations

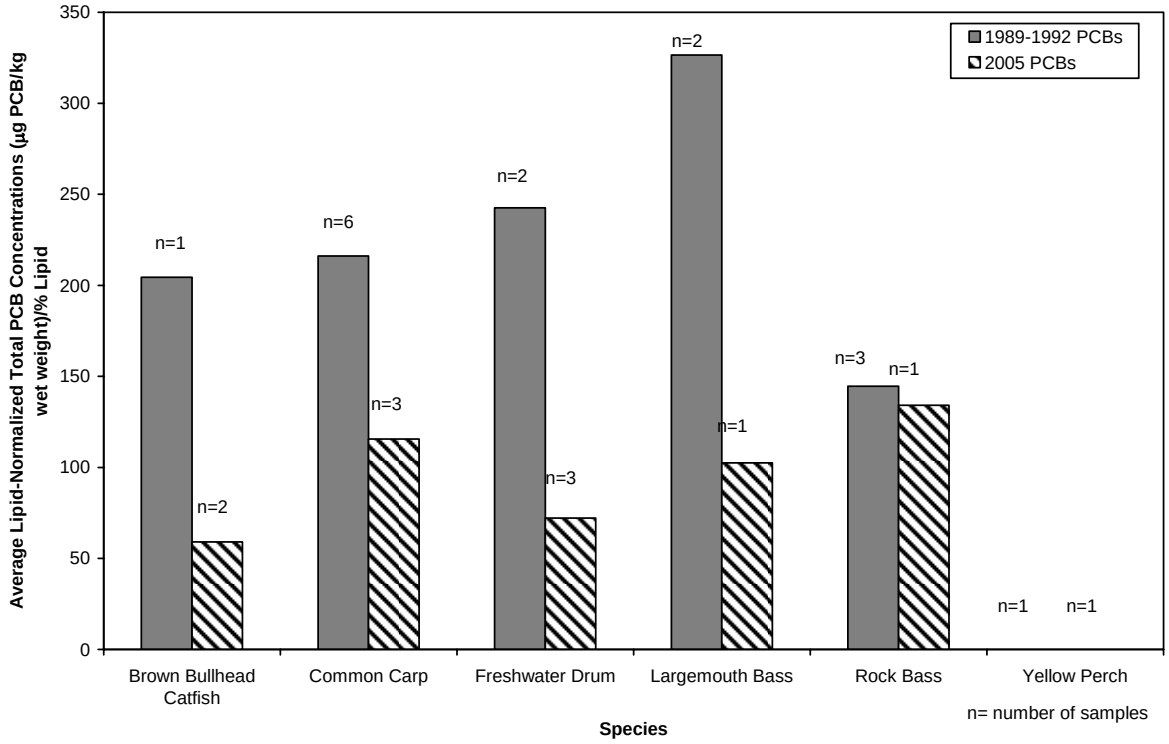
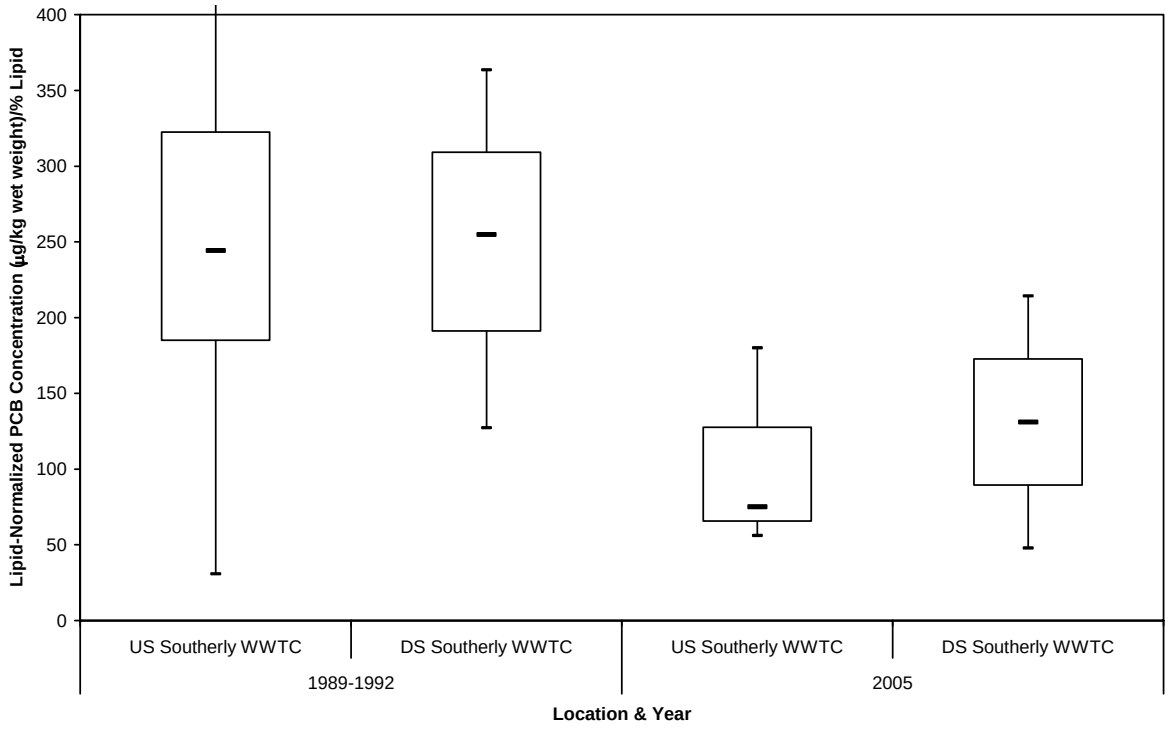


Figure 19. Cuyahoga River Common Carp Fillet Lipid-Normalized PCB Concentrations
(Max., 75th Pctile., Median, 25th Pctile., Min.)



In addition to the fillet samples that were analyzed for PCB concentrations, the same was done for five whole-body common carp from the old Cuyahoga River channel. This was done because similar sampling had been performed by Ohio EPA in the past. The average lipid-normalized PCB concentration for these fish was 231 (mg PCB/kg)/% lipid. This was higher than the average concentration in the river AOC fillet samples of 115 (mg/PCB/kg)/% lipid. These results are not unexpected given the historical problems with contamination in this part of the river and its legacy of contaminated sediments.

PESTICIDES

A total of 42 composite and 5 whole-body fish samples were analyzed for pesticide concentrations by STL North Canton. The list of pesticides that were analyzed for is given in Table 1. These pesticides were chosen for analysis because their use has been banned due to their bioaccumulative properties in fish and other wildlife. None of the samples contained detectable concentrations of these pesticides. However, the detection limits for these compounds were higher than in the 1989-1992 study. This was due to matrix interference in the samples. Therefore, the current pesticide results are not comparable to those of the previous study.

Table 1. Pesticides Analyzed	
Aldrin	Alpha- BHC
Beta-BHC	Delta-BHC
Gamma-BHC	Chlordane
4,4'-DDD	4,4'-DDE
4,4'-DDT	Dieldrin
Endrin	Endrin aldehyde
Endosulfan I	Endosulfan II
Endosulfan sulfate	Heptachlor
Hepachlor epoxide	Methoxychlor
Toxaphene	

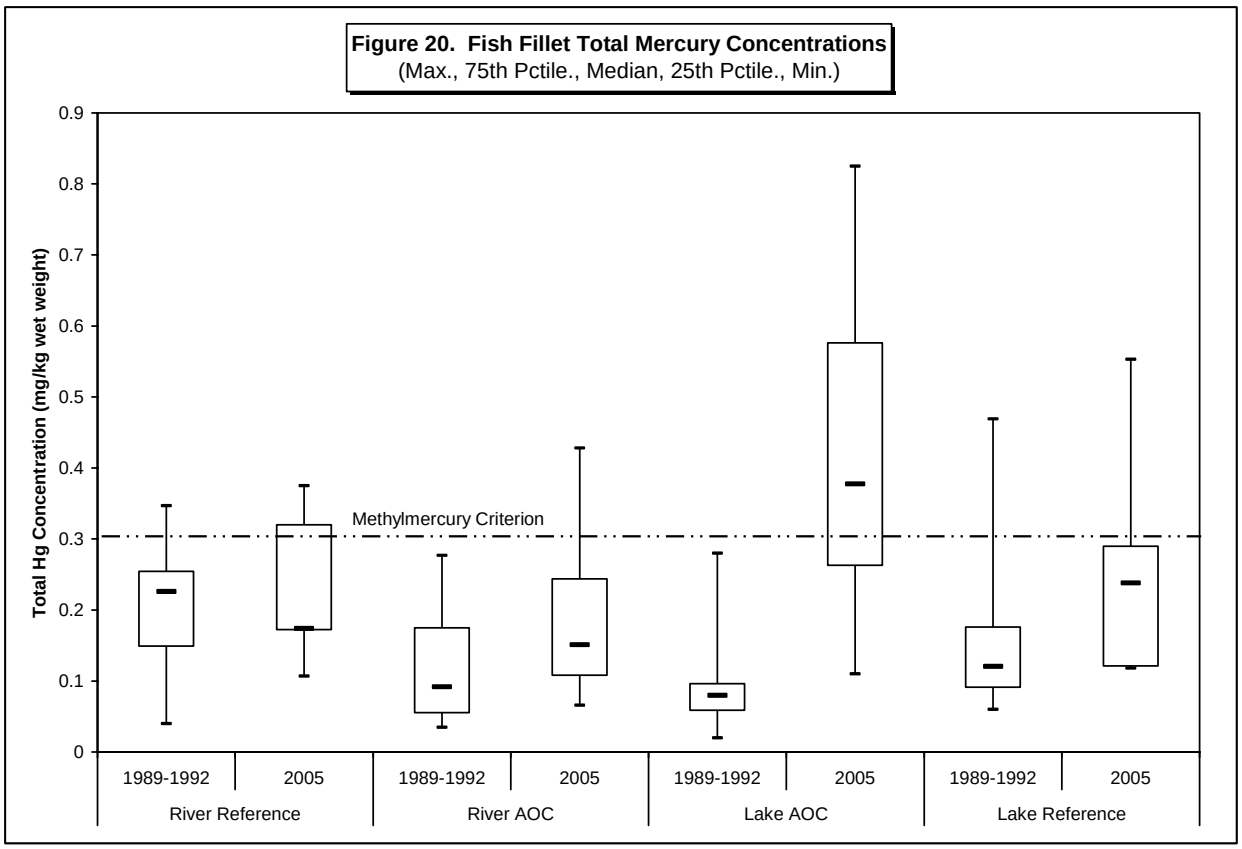
Mercury

A total of 41 composite fillet and 116 whole-body samples were analyzed for mercury concentrations by NEORSD Analytical Services. Mercury was detected in all of the samples.

Composite Fillets

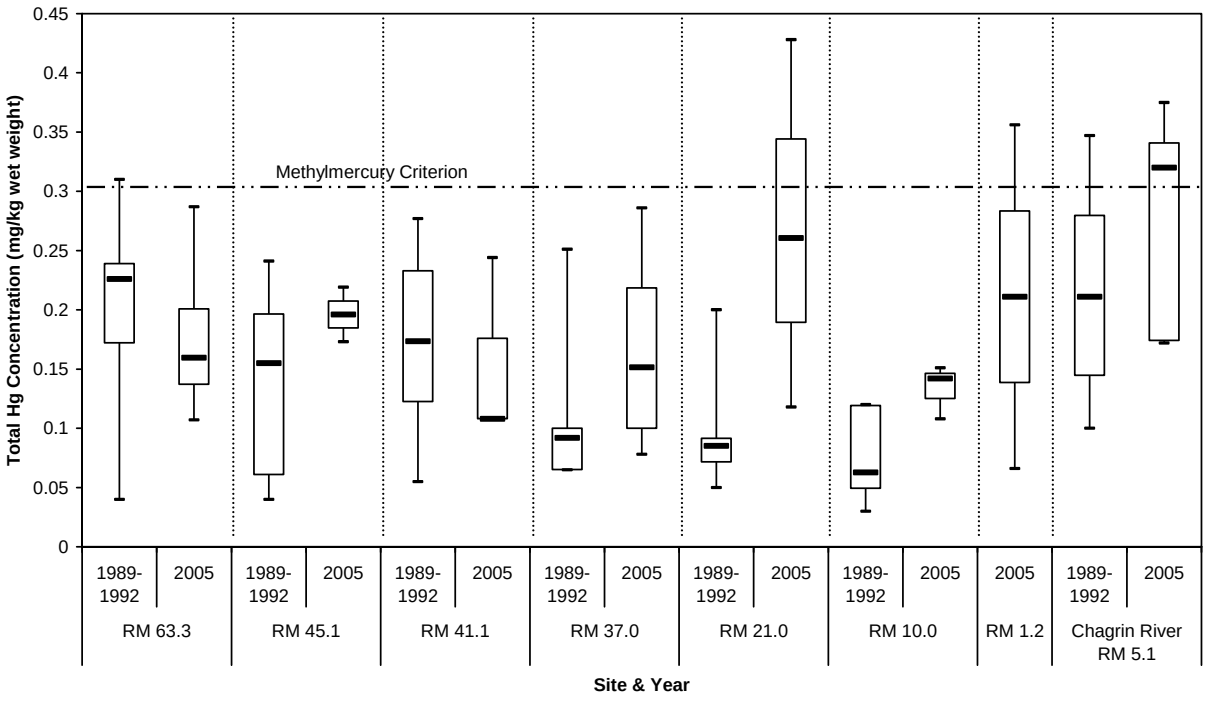
Analysis of mercury concentrations in composite fillet samples was performed to determine potential impacts if consumed by humans. The results were evaluated in terms of changes over time and differences between locations, and they were compared to the U.S. EPA human health water quality criterion for methylmercury. This criterion of 0.3 mg methylmercury/kg fish tissue wet weight was adopted in 2001 and is intended to protect consumers of fish and shellfish. It is assumed that virtually all mercury in fish tissue is in the form of methylmercury, and therefore, analysis of mercury serves as a substitute for measuring methylmercury (USEPA 2006).

The composite fillet mercury results for the Cuyahoga River and Lake Erie AOC were first compared to the results from their respective reference sites and to each other (Figure 20). The concentrations at all four of the types of locations were generally higher in 2005 compared to the 1989-1992 study. The greatest increase, with also the highest overall concentrations, was in the lake AOC. The reason for the increase in mercury in the fish, especially at the magnitude observed in Lake Erie, is uncertain. All four types of sites had some fish with mercury concentrations greater than the U.S. EPA methylmercury water quality criterion. However, the lake AOC was the only one with a median concentration that exceeded the criterion.



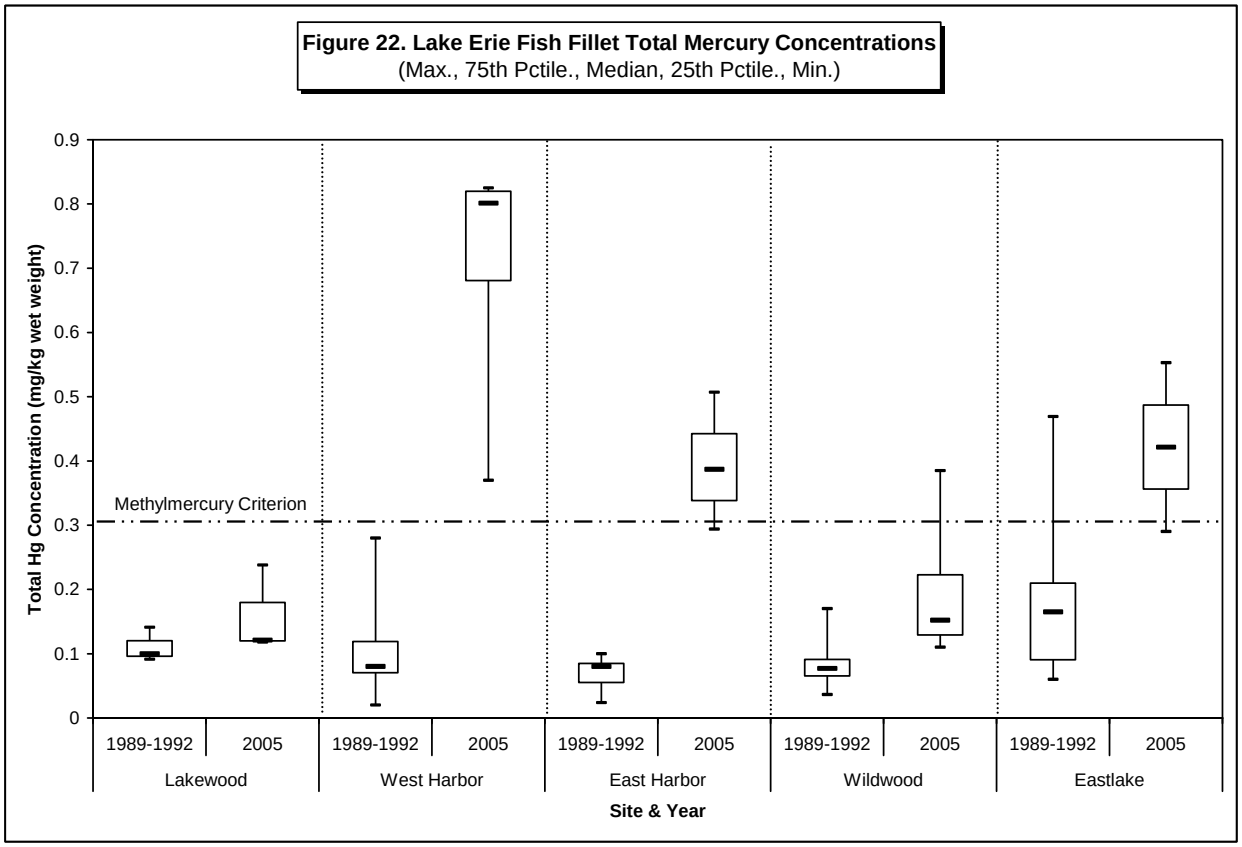
A comparison of mercury concentrations in fish fillet samples collected at river sites shows that the generally highest overall concentrations were in the Chagrin River (Figure 21). Within the Cuyahoga River, the site near State Route 82 (RM 21.0) in the Cuyahoga Valley National Park generally had the highest concentrations, while the sites upstream and downstream of the Akron WWTP (RM 41.1 & 37.0) and downstream of Southerly WWTC (RM 10.0) generally had the lowest concentrations. There was also a general increase in mercury concentrations when comparing the 1989-1992 study to the 2005 study. The only two sites that exhibited a general decrease were the reference site at Shalersville (RM 63.3) and downstream of the Akron WWTP. The site near State Route 82 had the greatest increase in mercury. A comparison of the mercury concentrations in the river sites showed that, although several of the sites had fish with concentrations that exceeded the U.S. EPA criterion, only the site at the Chagrin River had a median concentration greater than 0.3 mg/kg.

Figure 21. Cuyahoga River AOC Fish Fillet Total Mercury Concentrations
(Max., 75th Pctile., Median, 25th Pctile., Min.)



For the Lake Erie sites, the mercury concentrations were generally higher than in the Cuyahoga River (Figure 22). The highest concentrations occurred within the Cleveland Harbor and at the reference site at Eastlake, with almost all of the mercury concentrations in the fish collected from these locations greater than the U.S. EPA methylmercury criterion. As with the river, the 2005 results showed higher mercury levels than in the 1989-1992 study. The largest increase, almost an order of magnitude

higher than previously, was in the fish collected from the West Harbor site.



Prior to examining the mercury results for each species, an analysis was done to determine whether there was a relationship between the age and size of the fish and mercury concentration (Figures 23-26). In the 1989-1992 study, only a limited number of fish were aged. For the 2005 study, most of the fish were aged, but there were not enough samples collected for each species to establish a definite relationship with mercury concentration. Therefore, only the size results from the 1989-1992 study were considered useful in this analysis. It was found that for common carp in both the Cuyahoga River and Lake Erie, there was a slightly stronger relationship between length and mercury concentration than for weight, although both did show some correlation. Based on these results, the species results were evaluated in terms of fish length.

Figure 23. Cuyahoga River Common Carp Fillet Total Mercury Concentrations vs. Length (1989-1992)

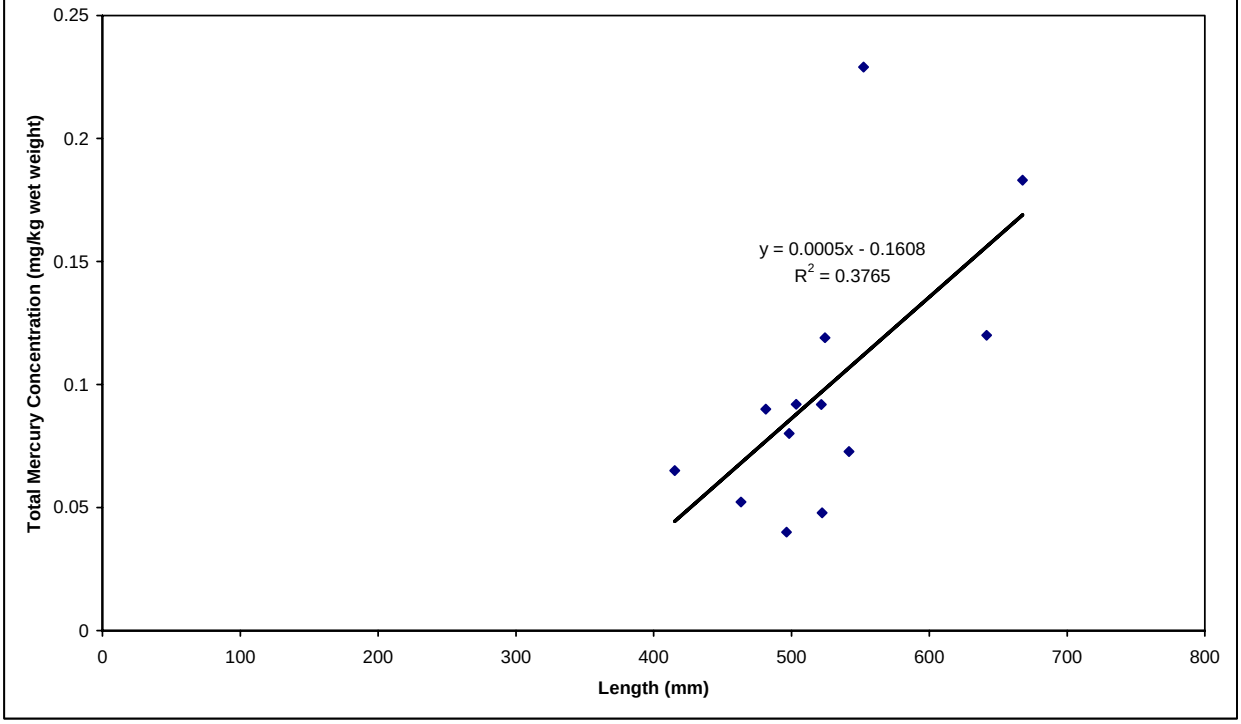


Figure 24. Cuyahoga River Common Carp Fillet Total Mercury Concentrations vs. Weight (1989-1992)

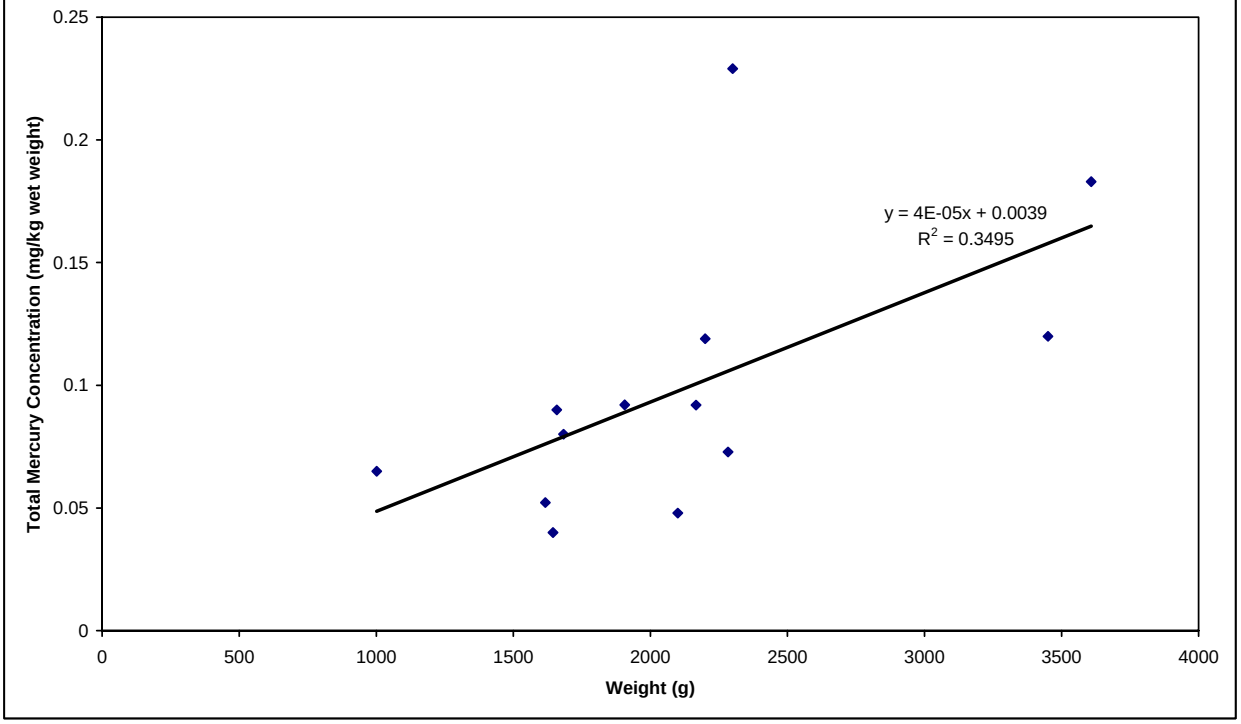


**Figure 25. Lake Erie Common Carp Fillet
Total Mercury Concentrations vs. Length (1989-1992)**

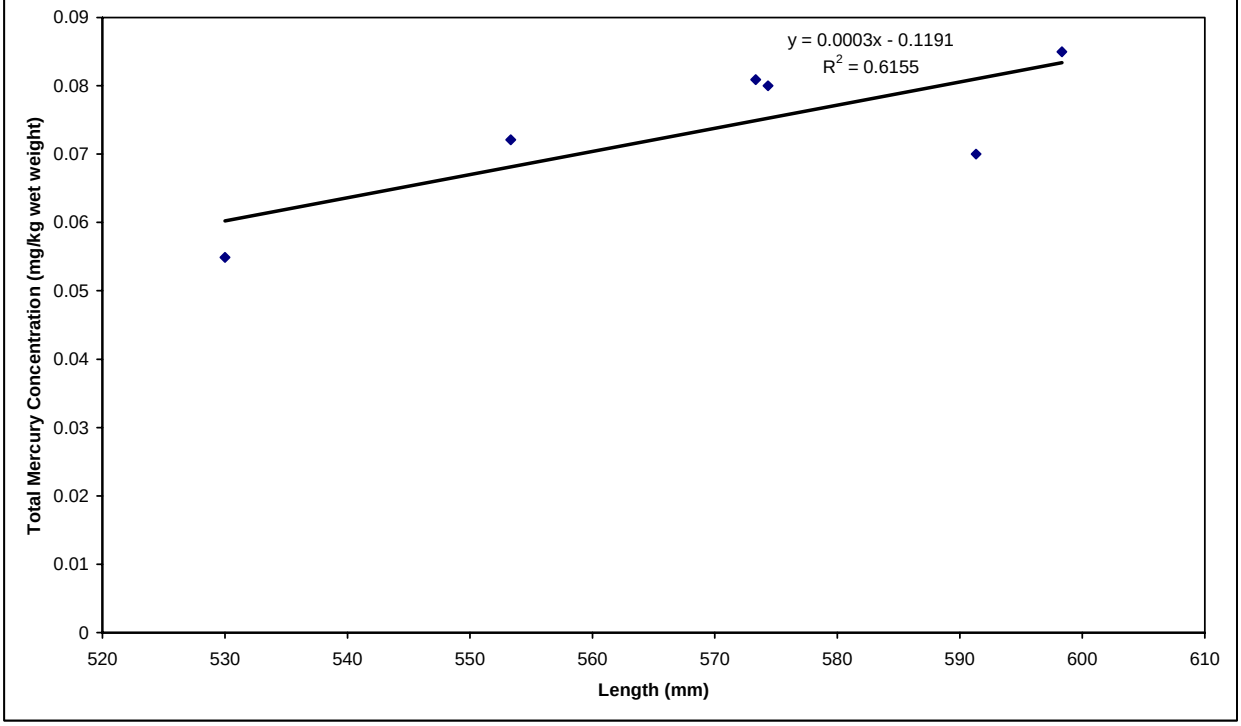
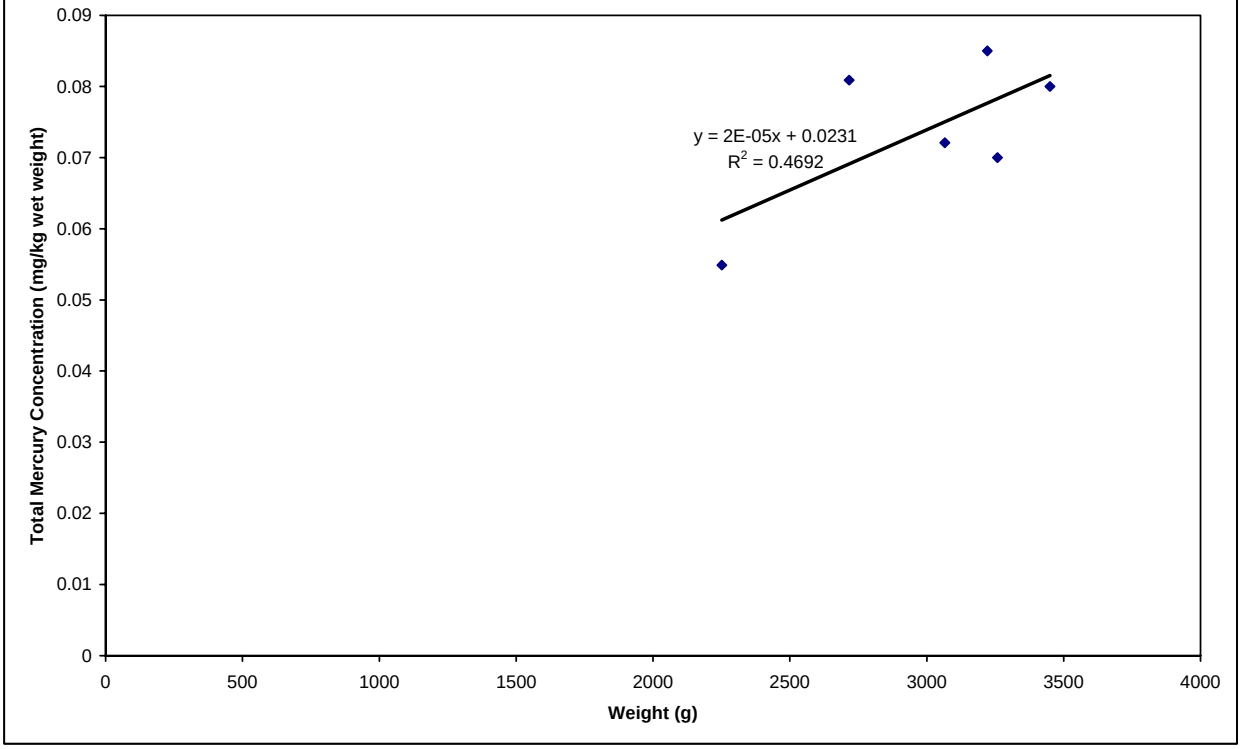
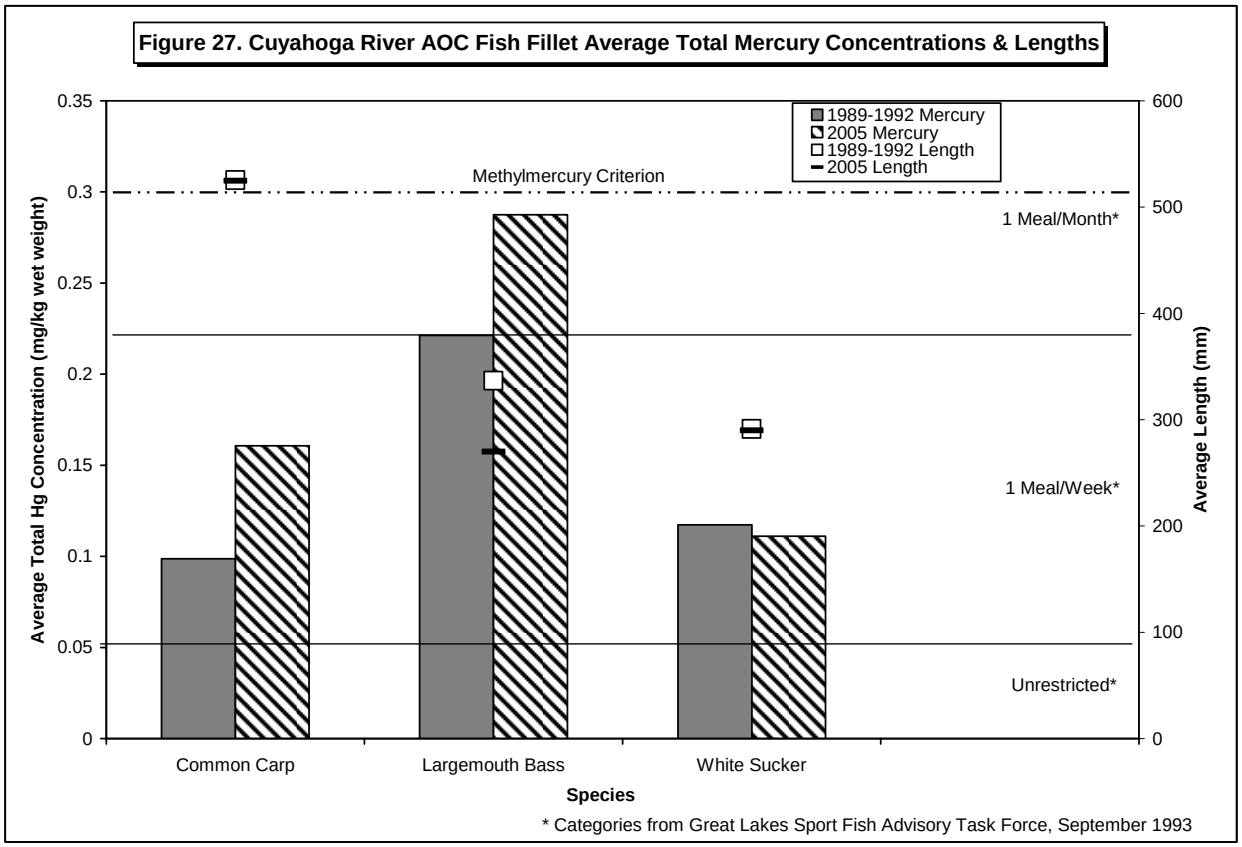


**Figure 26. Lake Erie Common Carp Fillet
Total Mercury Concentration vs. Weight (1989-1992)**



Within the Cuyahoga River sites, there were three species that were collected in both the 1989-1992 and 2005 studies (Figure 27). For common carp, there was an increase in average mercury concentration. Since the average length of the carp was similar for both studies, the increase appears to be the result of higher levels of mercury bioaccumulation. For largemouth bass, there was also an increase in average mercury concentration, with fish that were of shorter length than the previous study. White suckers had similar mercury concentrations in 2005 compared to 1989-1992, with fish that were approximately the same length. In all three species, the average mercury concentration was lower than the methylmercury criterion adopted by the U.S. EPA.

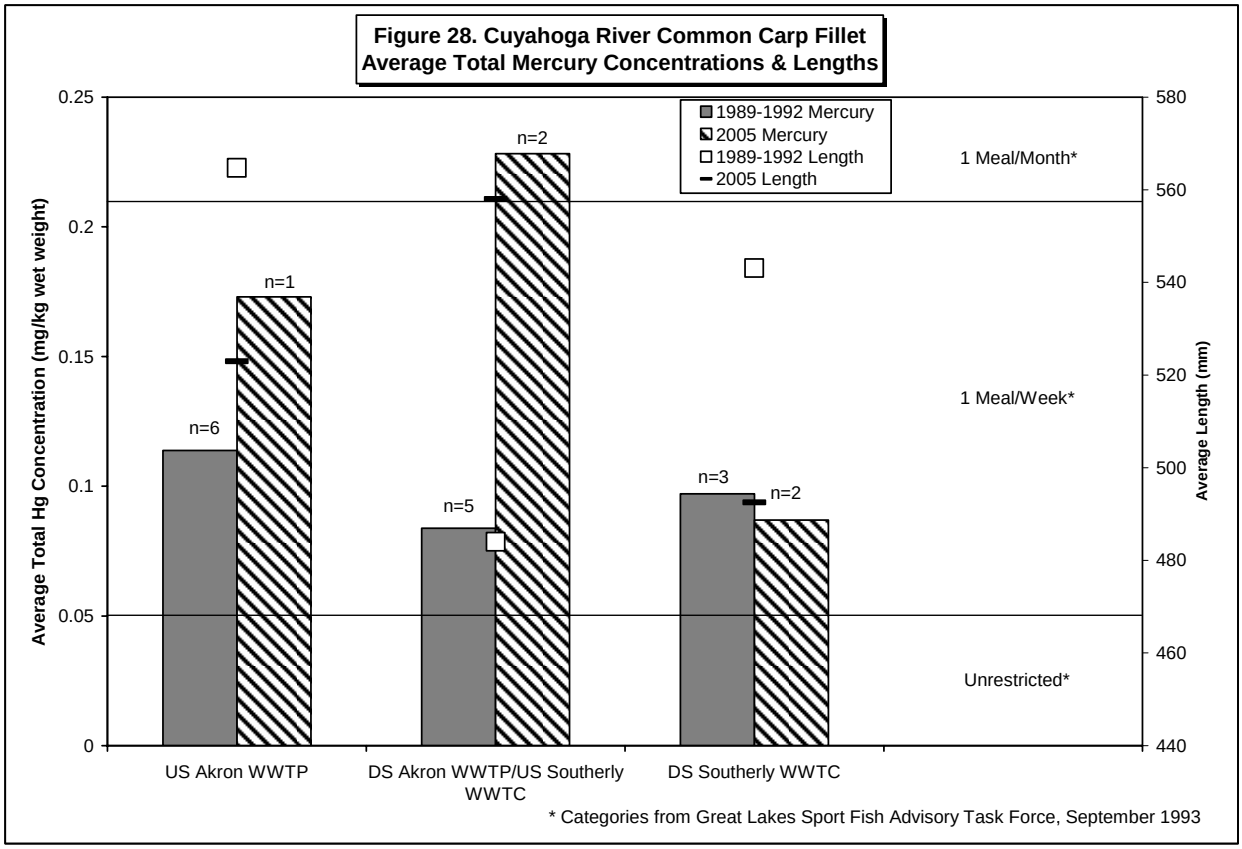


As with PCBs, the State of Ohio also has a fish consumption advisory in effect for mercury (Ohio EPA 2006). The advisory is currently based upon a health protection value of 0.1µg mercury/kg/day for those people consuming sport fish as presented in an addendum to the 1993 *Protocol for a Uniform Great Lakes Sport Fish Consumption Advisory* (Great Lakes Fish Advisory Workgroup 2005). The mercury concentrations in the composite fillet samples collected during this study were compared to the categories presented in the addendum to the Great Lakes Protocol. These comparisons should not be interpreted as an update to the State of Ohio fish consumption advisory, since a more extensive data set may be needed before advisory changes can be made.

According to the existing State of Ohio advisory, it is recommended that no more than one meal per week of any sport fish caught in any water body of Ohio be eaten. For common carp, there is an additional recommendation in the Cuyahoga River from Bath Road to the mouth that, for fish over 24", only one meal per month should be consumed. Based on the 2005 results, the average mercury concentrations in both common carp and white sucker would fall into the "one meal per week category". Of the common carp, only one sample was comprised of fish with an average length greater than 24", and it also would into the same category. For largemouth bass, the concentration was high enough that it would fall into the "one meal per month" category.

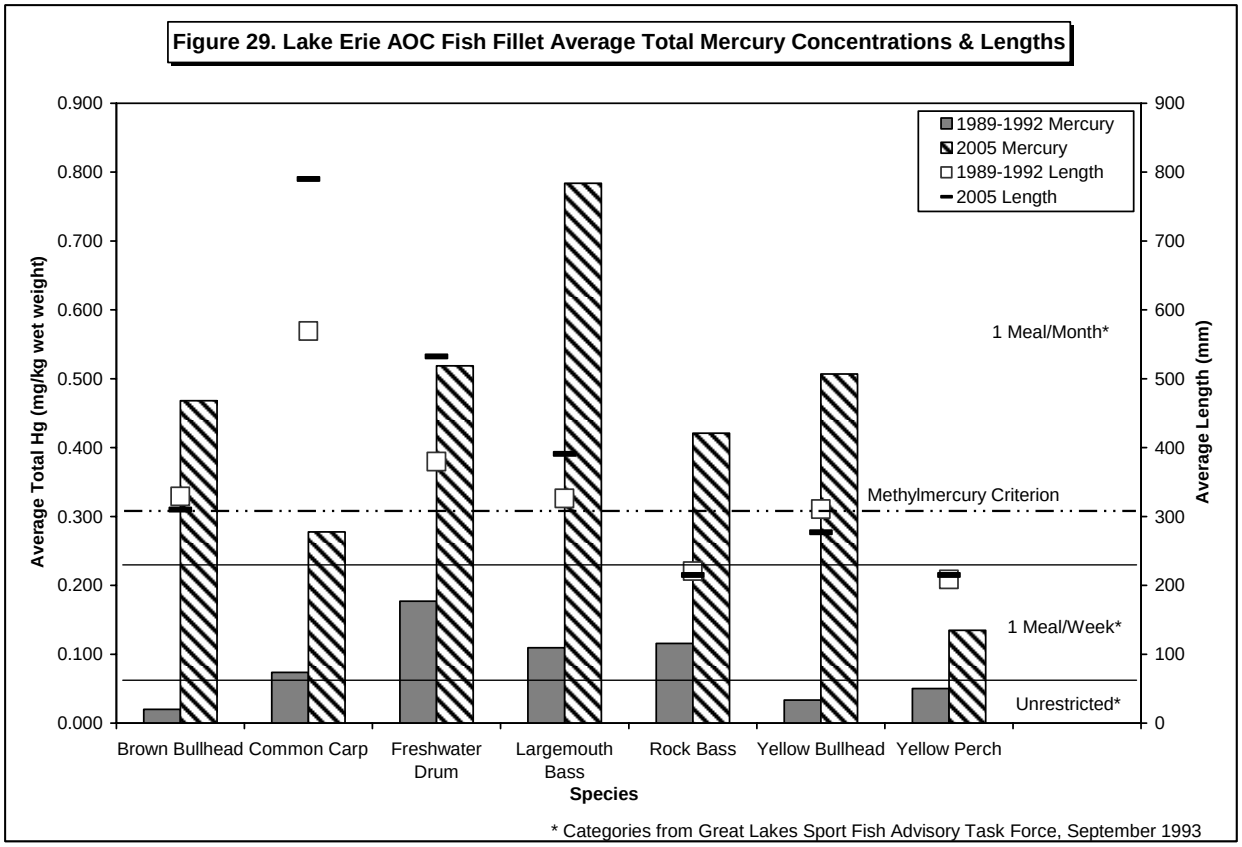
Trace concentrations of mercury can be measured in effluents from wastewater treatment plants, but the significance of this to mercury bioaccumulation in fish tissue is not well understood. Therefore, common carp in the Cuyahoga River were also examined to determine the potential impacts of effluents from the Akron WWTP and the Southerly WWTC on mercury concentrations (Figure 28). The section of river between the Akron WWTP and the Southerly WWTC (RM 37.0 & 21.0) had the highest average mercury concentration. However, the fish collected from this section were also larger than those in the other two sections that were analyzed. Downstream of the Southerly WWTC (RM 10.0 & 1.2), the average mercury concentrations were the lowest. Once again, these results are most likely due to the size of the fish that were collected, as the fish from this section were the smallest. There is no indication in these data that either the Akron WWTP or the Southerly WWTC is currently impacting fish tissue mercury levels in the river.

A comparison of results between the 1989-1992 and 2005 studies leads to similar conclusions. It was found that, in the stretch of river upstream of the Akron WWTP (RM 63.3, 45.1, & 41.0), there was a general increase in mercury from 1989-1992 to 2005, despite the fish being smaller in 2005 (Figure 28). At the sites downstream of the Akron WWTP and upstream of the Southerly WWTC, there was a greater increase in mercury between the two studies, but the fish were also much larger in 2005. The increase in mercury that was observed in the most upstream reach was not apparent downstream of Southerly WWTC. The mercury levels there were generally slightly lower in 2005 compared to 1989-1992, with the fish length also being lower. No clear impact from any effluent changes at either the Southerly WWTC or the Akron WWTP is evident in the mercury concentrations, especially considering that the most upstream reach of the river exhibited an increase.



In Lake Erie, all of the species showed an increase in average mercury concentrations from the 1989-1992 study to the 2005 study. For brown bullhead, rock bass, yellow bullhead, and yellow perch, the fish collected in 2005 were of generally the same or slightly smaller size, indicating that the increase was not due to larger fish (Figure 29). For common carp, freshwater drum, and largemouth bass, there was an increase in average mercury concentrations, but the fish were also larger. However, the increase in mercury seemed to be much greater than the increase in size and, therefore, probably reflects greater mercury bioaccumulation. The average mercury concentrations in all of the species collected from the lake, except common carp and yellow perch, exceeded the methylmercury criterion.

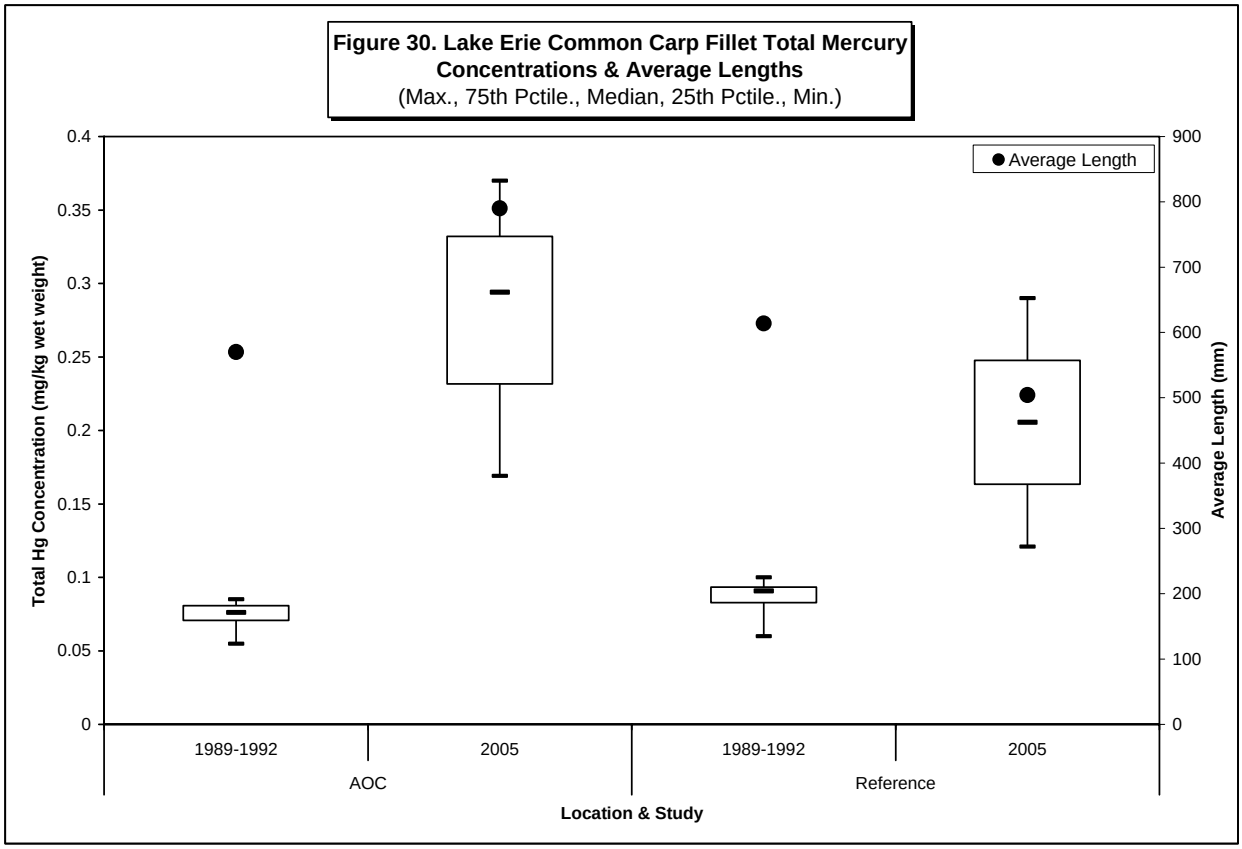
The only fish consumption advisory in Lake Erie for mercury is the general recommendation of limiting meals of fish from all Ohio waters to no more than one per week. For the fish collected in the lake, yellow perch was the only species with an average mercury concentration in the current study that fell into this category. All of the other fish had average mercury concentrations that would fall into the more restrictive "one meal per month" category.



Common carp collected from the Lake Erie AOC were also compared to those from the two reference sites. As seen in Figure 30, the fish from the AOC had higher mercury concentrations. They were also, however, larger than the reference site fish, and this may account for the difference. When taking into account size differences, it appears that both site types had similar increases in mercury concentration when comparing the 2005 results to the previous study.

Whole-Body Samples

The mercury concentrations in individual whole-body fish were measured to determine potential impacts on piscivorous wildlife. This type of analysis was not performed in the 1989-1992 study. The wildlife criterion for mercury according to the Great Lakes Initiative (1995) is 1.3 ng/L. This criterion for ambient water quality can be converted to a fish-tissue basis and adjusted based on trophic level-specific bioaccumulation factors (BAFs). For trophic level 3 species, the BAF is 27,906 L/kg, while the BAF for level 4 species is 139,532 L/kg (U.S. EPA 1995).



A comparison of the river and lake AOC and reference locations indicated that there was not a great difference between the four types of sites (Figure 31). The river AOC sites had the lowest median concentration. To determine whether or not these concentrations exceeded the Great Lakes Initiative wildlife criterion, a weighted bioaccumulation factor was calculated based on the number of fish species collected in each trophic level assigned by the U.S. EPA (1995). The weighted bioaccumulation value was then used to determine the corresponding mercury concentrations in the fish. It was found that, as a whole, the median concentration in the fish from the river reference sites did not exceed this value, while the median concentrations in the fish from the lake and river AOC and the lake reference sites did.

In the samples collected from the river, the highest concentrations were found at Cuyahoga RM 21.0 and in the Chagrin River (Figure 32). Using the same method described previously for determining the mercury concentration necessary to meet the GLI wildlife criterion, it was found that the only two sites that had median fish mercury concentrations lower than the calculated value based on the criterion were in the Cuyahoga River at RM 63.3 and 21.0. The median concentrations at all the other sites were greater than this value, with the sites in the Chagrin River and at Cuyahoga RM 37.0 considerably so.

Figure 31. Whole Body Fish Total Mercury Concentrations (2005)
(Max., 75th Pctile., Median, 25th Pctile., Min.)

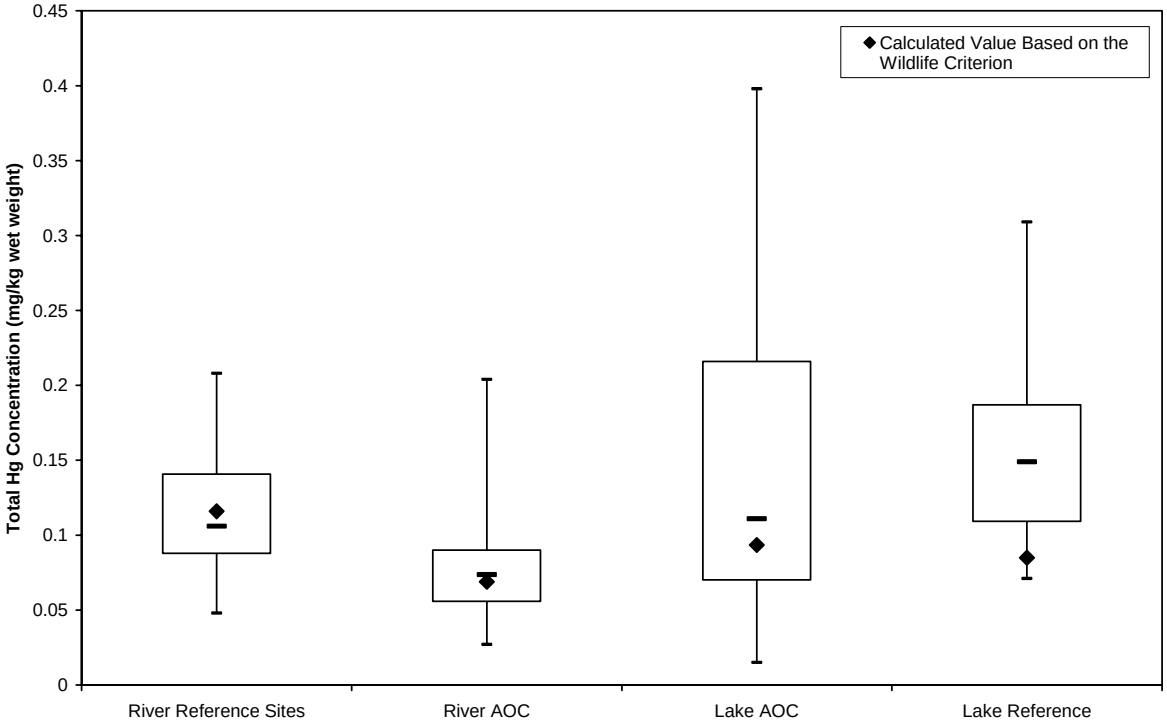
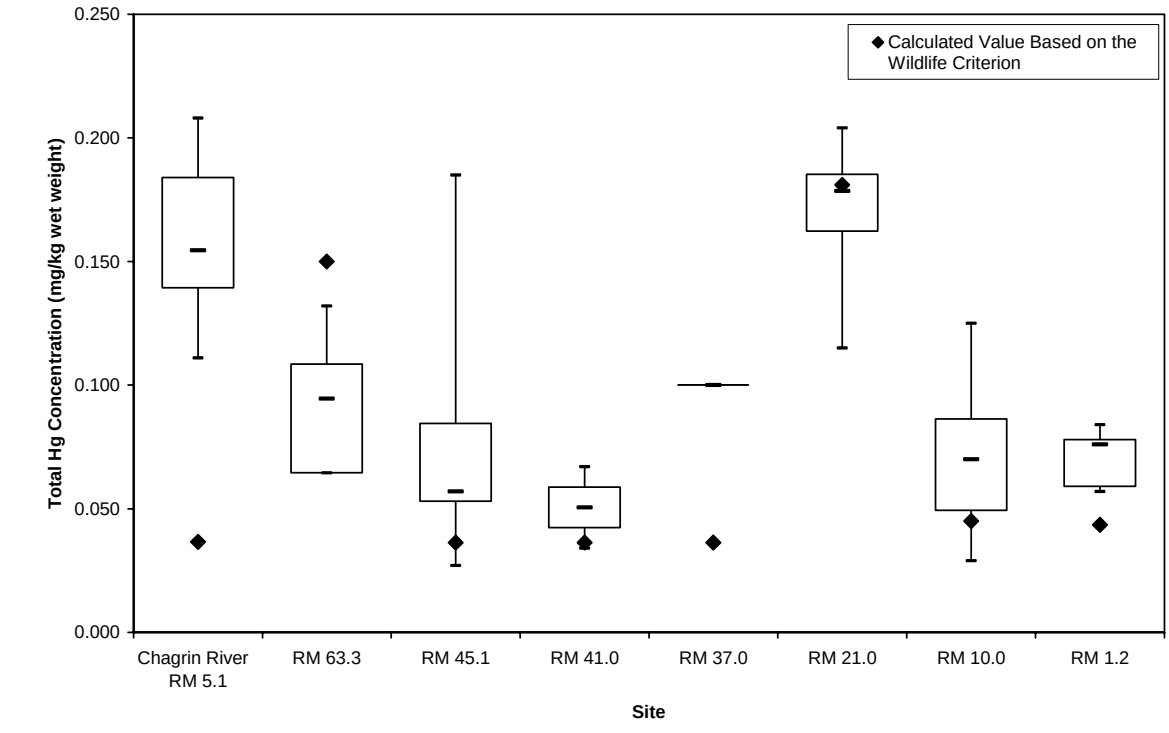
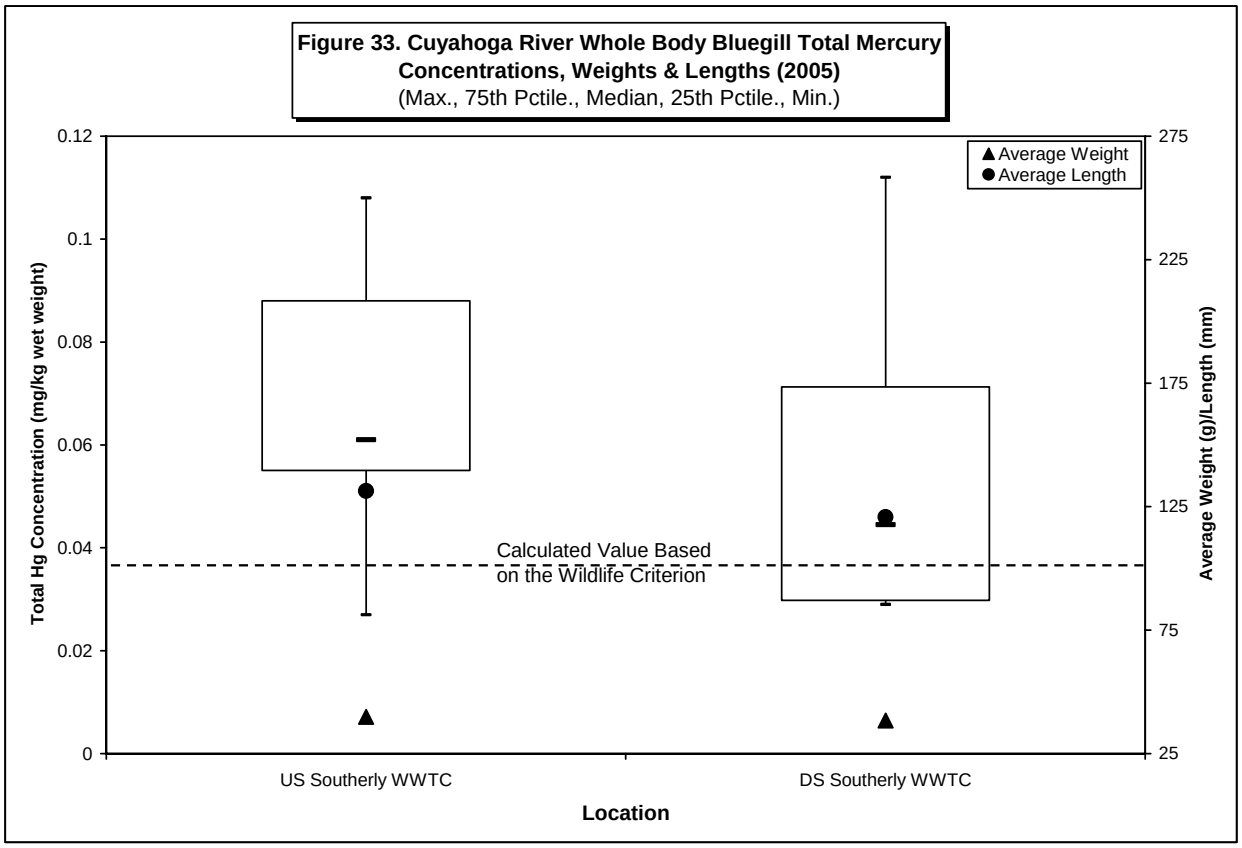


Figure 32. 2005 Cuyahoga River Whole Body Fish Total Mercury Concentrations (2005)
(Max., 75th Pctile., Median, 25th Pctile., Min.)



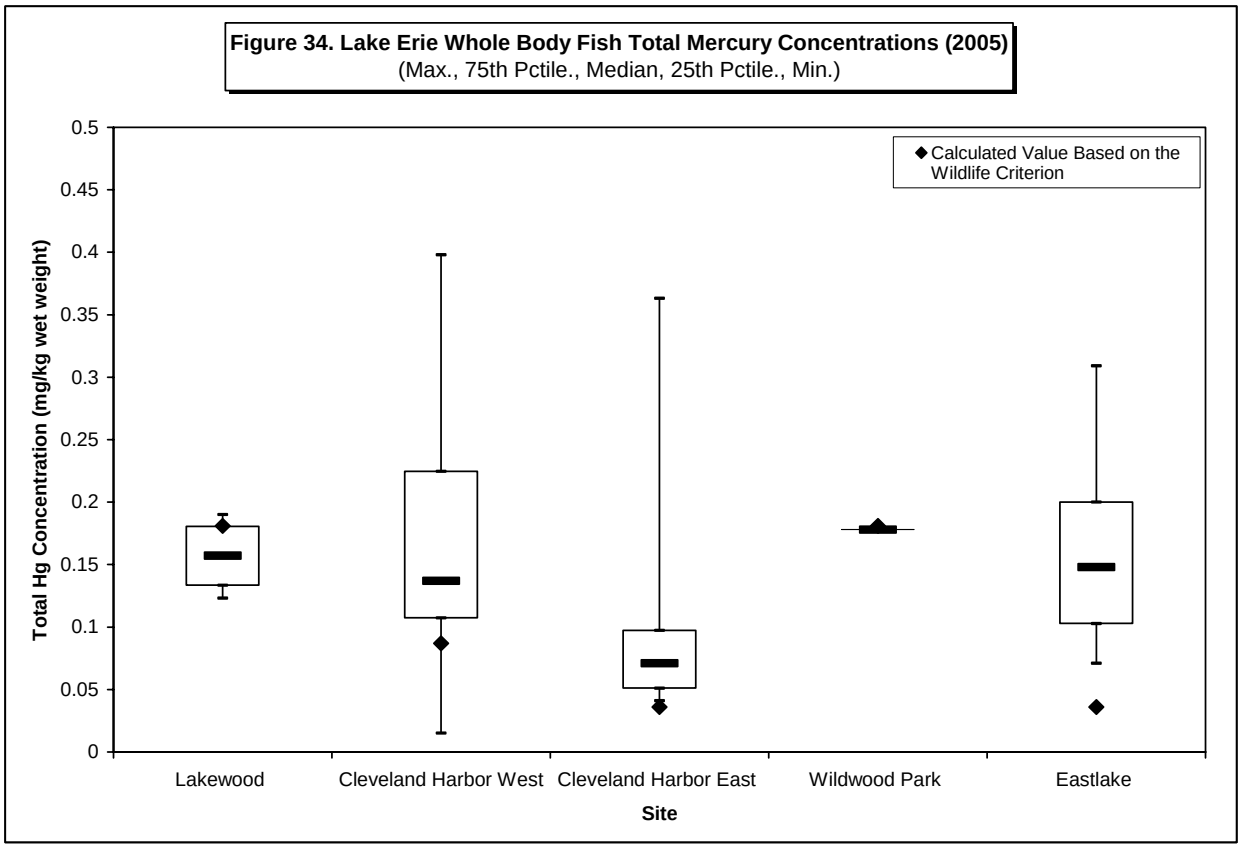
Within the Cuyahoga River, bluegill mercury concentrations were examined to determine if there was a difference between upstream (RM 63.3 & 45.1) and downstream (RM 10.0) of Southerly WWTC. Bluegill were chosen for this analysis because they were the only species with enough samples to provide a meaningful comparison. The same analysis could not be completed upstream and downstream of Akron WWTP due to a lack of bluegill collected at some sites. As indicated by Figure 33, there appeared to be no significant differences between the mercury concentrations nor between the sizes of fish collected at these locations, further supporting a conclusion of no clear impact from the Southerly WWTC on fish tissue mercury concentrations. Evaluating only bluegill, the calculated value based on the wildlife criterion was exceeded at both upstream and downstream of the WWTC.



For the fish collected from Lake Erie, there were no major differences between the AOC and reference sites (Figure 34). Although the sites at East Harbor, West Harbor, and Eastlake had median concentrations that exceeded the calculated value based on the wildlife criterion, the mercury levels differed from the fillet samples in not being substantially higher than the other two sites.

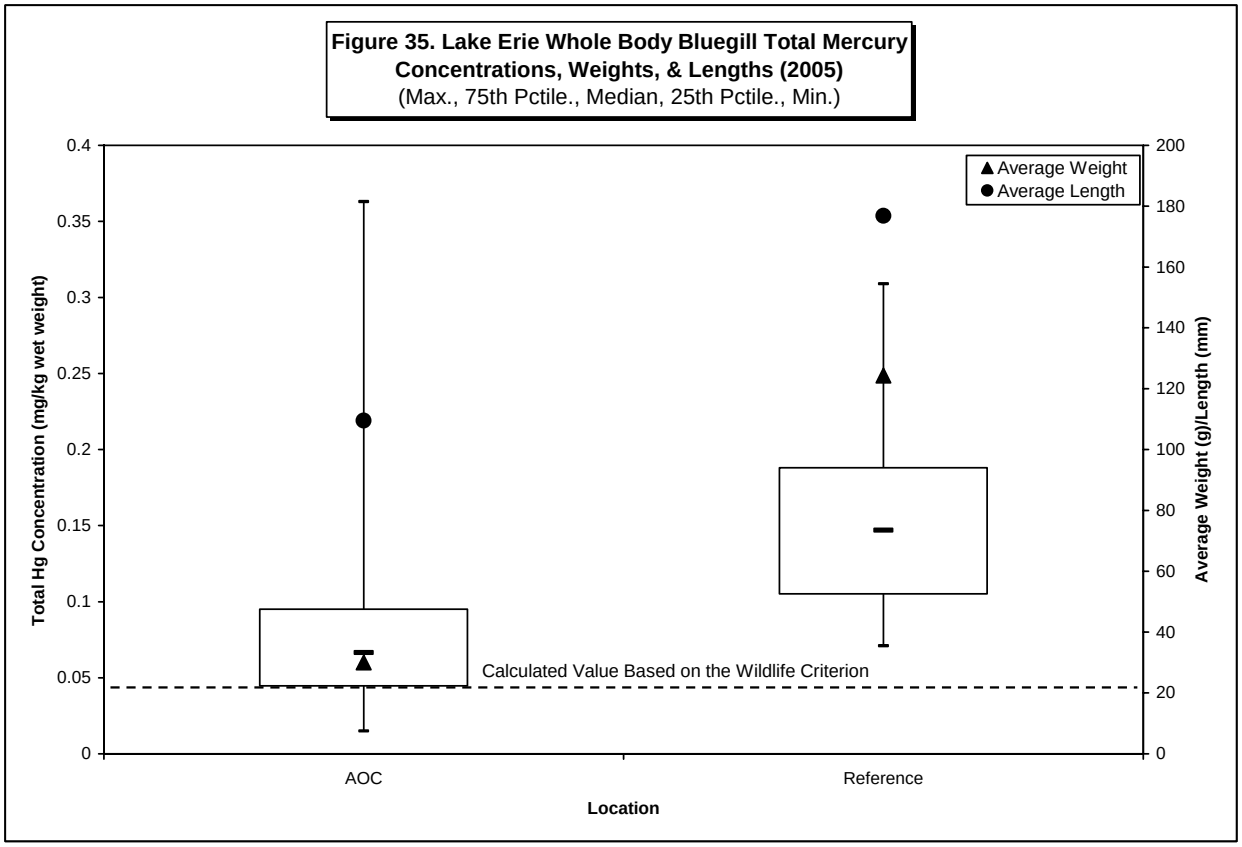
Comparing bluegill collected in the AOC to those from the two reference sites shows a higher median mercury concentration in the latter (Figure 35). This may be due

to size, however, as the reference site bluegills were larger than those from the AOC. As in the Cuyahoga River AOC, the calculated value based on the wildlife criterion was exceeded at both reference sites.



Selenium

In November 2004, U.S. EPA issued draft acute and chronic aquatic life water quality criteria for selenium. These criteria were developed because selenium can be toxic to aquatic life at high levels (U.S. EPA 2004). The draft chronic criterion is expressed as a whole-body tissue concentration of selenium (dry weight). Therefore, the best way to measure attainment of the criterion is by analyzing fish tissue. Eventually, this fish tissue criterion could be translated into an ambient water quality criterion to enable the issuance of water quality-based effluent limits for selenium. Information indicating site-specific data for fish tissue levels of selenium had been lacking for both the Cuyahoga River and Lake Erie, and therefore, the ability to meet the criterion was unknown. Because of this, whole-body sport fish collected from each site were also analyzed for selenium, and the results were compared to the draft criterion.



Comparing the river and lake AOC and reference locations, it can be seen that the highest selenium concentrations generally occurred in the river reference sites (Figure 36). The maximum concentrations in the fish collected from these sites were above the draft criterion for whole-body fish tissue of 7.91 µg/g dry weight. In addition to this criterion, U.S. EPA has also drafted a trigger level for fish collected during the summer and fall to determine if selenium concentrations also need to be monitored during the winter. This concentration of 5.85 µg/g dry weight was exceeded in at least one of the fish collected from each of the four types of sites but, with the exception of the river reference sites, all had median concentrations below the trigger.

In the Cuyahoga and Chagrin Rivers, the greatest selenium concentrations occurred at Cuyahoga RM 63.3 (Figure 37). This site had a median selenium concentration greater than the draft criterion. Two of the sites, RM 45.1 and 10.0, had maximum concentrations that were greater than the draft winter monitoring trigger but median concentrations that were below it. For the other river sites, all of the fish had selenium concentrations that were lower than the draft criteria.

Figure 36. Whole Body Sport Fish Selenium Concentrations (2005)
(Max., 75th Pctile., Median, 25th Pctile., Min.)

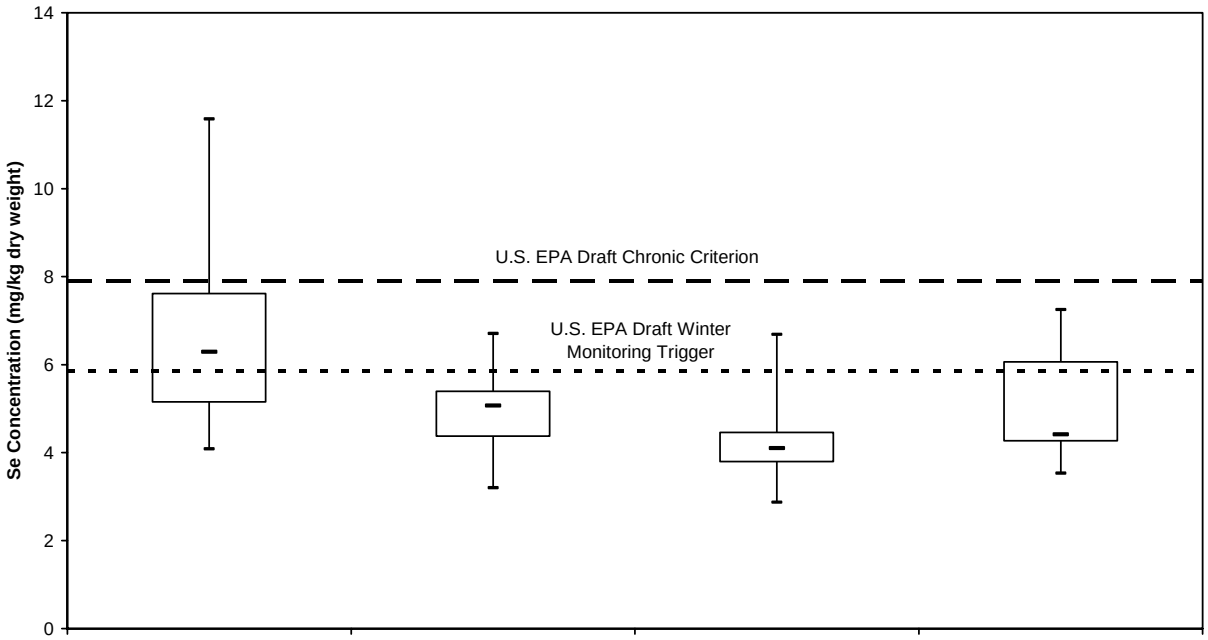
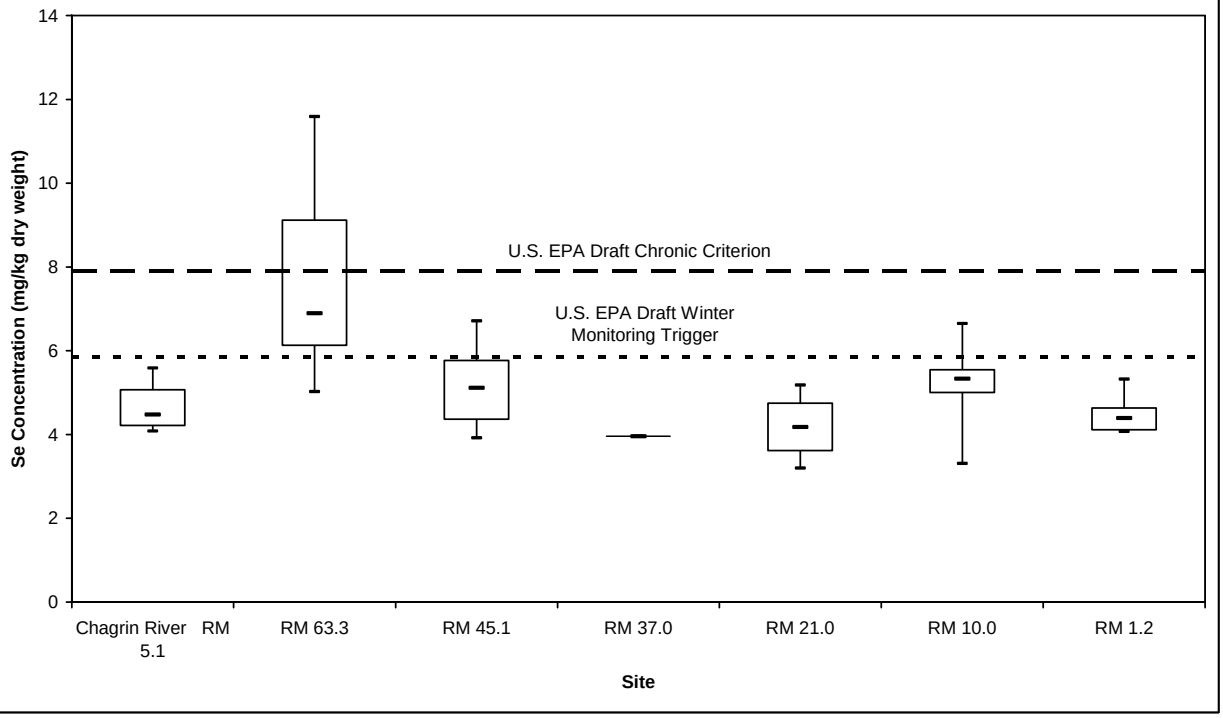
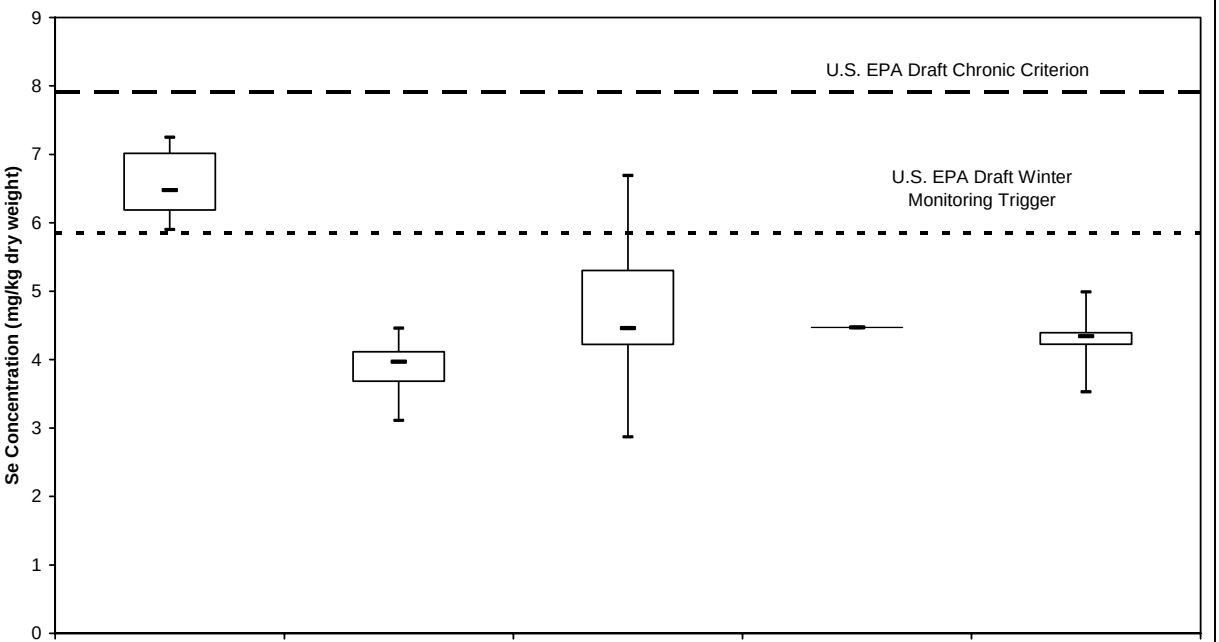


Figure 37. Cuyahoga and Chagrin River Whole Body Sport Fish Selenium Concentrations (2005)
(Max., 75th Pctile., Median, 25th Pctile., Min.)



For the Lake Erie sites, all of the fish had selenium concentrations below the draft criterion (Figure 38). Two of the sites, Lakewood and East Harbor, however, had fish with selenium concentrations that were greater than the draft winter monitoring trigger, with only the Lakewood site having a median concentration that was above it.

Figure 38. Lake Erie Whole Body Sport Fish Selenium Concentrations (2005)
(Max., 75th Pctile., Median, 25th Pctile., Min.)



Within the Cuyahoga River, bluegill selenium concentrations were examined to determine if there was a difference between upstream and downstream of Southerly WWTC. Similar to mercury, trace concentrations of selenium can be measured in effluents from wastewater treatment plants, but the significance of this to selenium in fish tissue is unknown. Bluegill were chosen for this analysis because much of the research used to develop the draft selenium criterion was based on this species. The median concentrations for these two locations were similar, indicating that the WWTC is not having an evident effect on selenium levels in fish (Figure 39). No bluegill selenium concentration downstream of the Southerly WWTC exceeded the draft criterion. However, the maximum selenium concentration at both locations was greater than the winter triggering monitor.

The median selenium concentrations in bluegill collected in the lake were similar at both the AOC and reference locations (Figure 40). The AOC fish, however, had a greater range of concentrations, some of which were greater than the draft winter monitoring trigger.

Figure 39. Cuyahoga River Whole Body Bluegill Selenium Concentrations (2005)
(Max., 75th Pctile., Median, 25th Pctile., Min.)

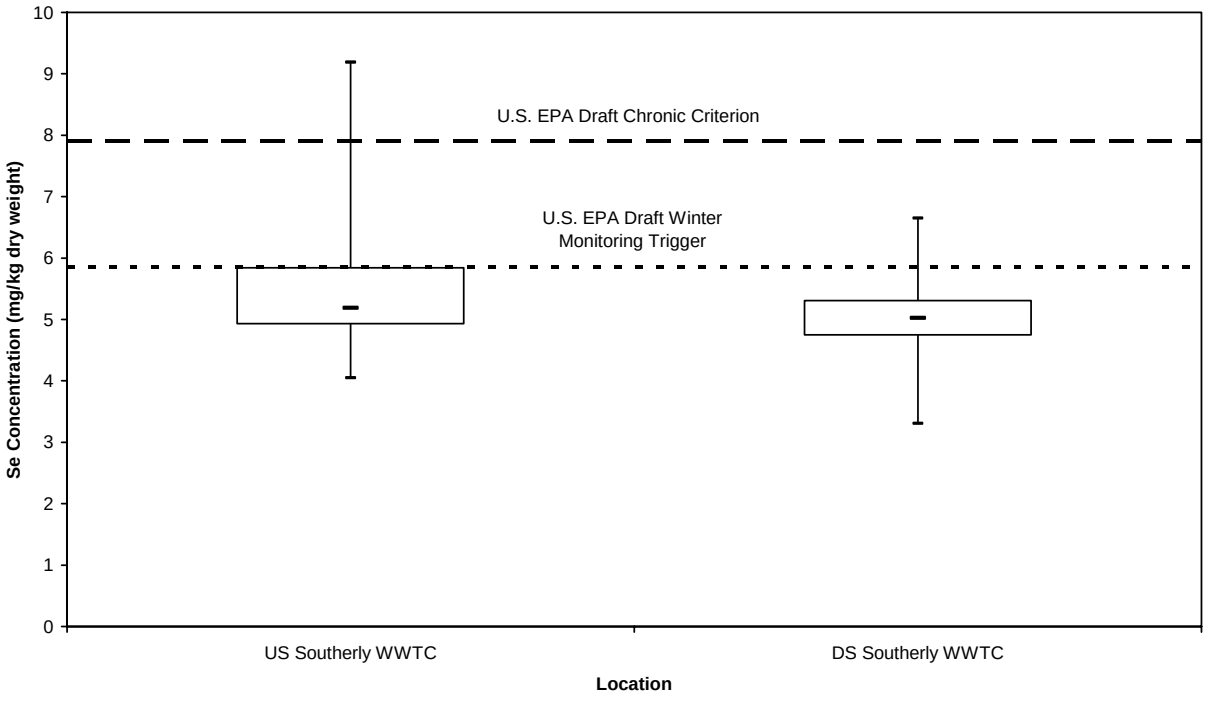
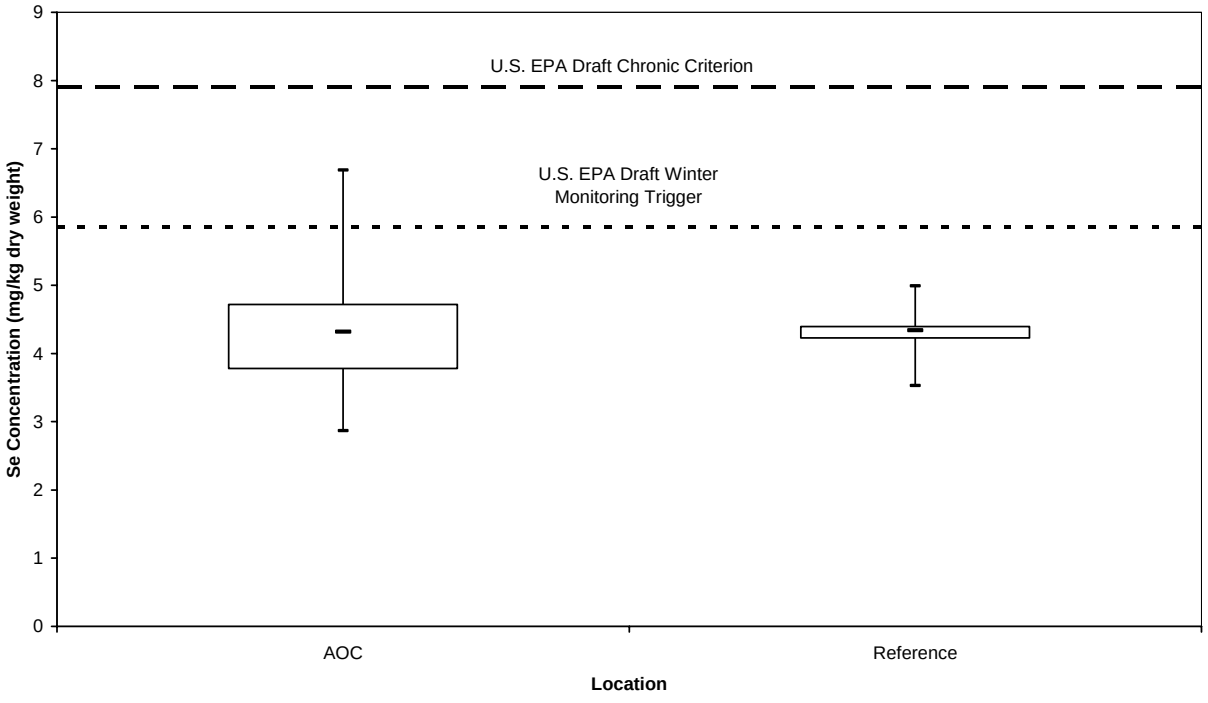


Figure 40. Lake Erie Whole Body Bluegill Selenium Concentrations (2005)
(Max., 75th Pctile., Median, 25th Pctile., Min.)



CONCLUSIONS

Analysis of contaminant levels in composite fillet and individual whole-body fish tissue samples collected from the Cuyahoga River, the Chagrin River, and Lake Erie showed that most contained varying concentrations of PCBs, mercury, and selenium. Site and historical comparisons for the analyzed samples exhibited a wide range of trends that were dependent upon the specific contaminant that was measured.

Generally, total PCB and lipid-normalized PCB concentrations measured in composite fish fillets showed higher concentrations at the AOC sites than at reference sites located outside the AOC. A historical comparison revealed that PCB concentrations were generally much lower in 2005 than in the 1989-1992 study.

For mercury, there was a general increase in the concentrations at most of the locations that were sampled, with fillet samples from Lake Erie having generally higher concentrations than those from the Cuyahoga River. This trend was not observed for whole-body mercury samples, as there appeared to be no significant differences among the river and lake AOC and reference sites. Although none of the Cuyahoga River sites had median fillet mercury concentrations exceeding the U.S. EPA human health criterion for methylmercury, several Lake Erie sites had median fillet mercury concentrations exceeding this value. At many of the sites, on both the river and the lake, whole-body mercury concentrations exceeded fish tissue values based on the Great Lakes Initiative wildlife criterion.

Finally, whole-body fish at all of the sites had average selenium concentrations that were lower than a draft U.S. EPA aquatic life water quality criterion. Most of the sites also had average selenium concentrations below a draft winter monitoring trigger. The greatest selenium concentrations occurred at the Cuyahoga River reference site.

Although it appears that contamination is still posing a potential problem for humans and wildlife consuming fish in the Cuyahoga River and Lake Erie, as indicated by the continuing need for consumption advisories, these problems are not restricted to only fish living in the AOC. Contaminant concentrations in many of the fish collected from reference sites outside of the AOC were also above recommended levels. In addition, fish contamination does not appear to be related to impacts from the NEORSD Southerly WWTC or the Akron WWTP, as contaminant levels were found to be similar or greater upstream of both these facilities.

It is recommended that continued monitoring is needed to further track changes in local levels of fish tissue contaminants and to evaluate the effectiveness of ongoing programs to control their sources. In addition, research into the factors that influence bioaccumulation of mercury and selenium should be supported. Finally, it is suggested

that these data be included by Ohio EPA in any consideration of possible updates to existing fish consumption advisories.

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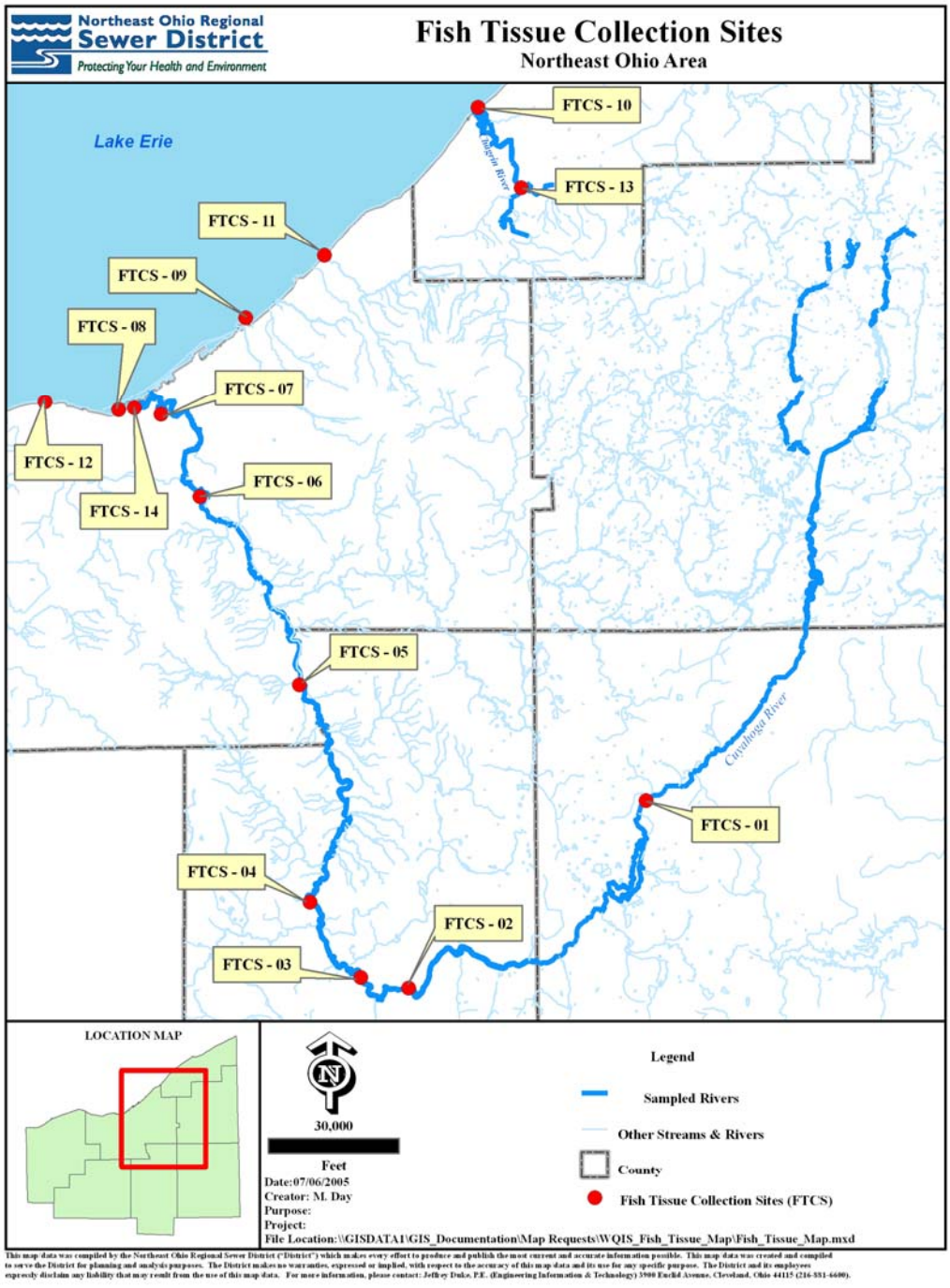
2005 Cuyahoga River and Nearshore Lake Erie Fish Tissue Study Appendices
November 3, 2006

Appendix A. Sampling Locations

Site Name	Site Location	Zone	River Mile	Purpose
Cuyahoga River at Shalersville (FTCS-01)	Upstream from State Route 303		63.3	Reference
Cuyahoga River Upstream of Akron (FTCS-02)	Ohio Edison Dam Pool		45.1	AOC
Cuyahoga River Upstream of Akron WWTP (FTCS-03)	Upstream of Portage Path and Downstream of the Little Cuyahoga River		41.0	AOC
Cuyahoga River Downstream of Akron WWTP (FTCS-04)	Near Ira Road		37.0	Impact of Akron WWTP/AOC
Cuyahoga River Near Route 82 (FTCS-05)	Upstream of canal diversion dam		21.0	AOC
Cuyahoga River at Southwest Interceptor (FTCS-06)	Downstream of Southerly WWTP		10.0	Impact of SWWTP/AOC
Cuyahoga River Navigation Channel (FTCS-07)	Irishtown Bend		1.2	AOC
Lake Erie West Harbor (FTCS-08)	Between Edgewater Marina and Cuyahoga River	41º 29’ 38.70” 81º 43’ 56.24” to 41º 30’ 8.64” 81º 42’ 43.33”		AOC
Lake Erie East Harbor (FTCS-09)	Between East 72nd Marina and East 55th Street	41º 32’ 39.79” 81º 38’ 15.37” to 41º 32’ 11.21” 81º 38’ 52.93”		AOC
Lake Erie off Eastlake (FTCS-10)		41º 40’ 33” 81º 26’ 21”		Reference

Lake Erie off Wildwood (FTCS-11)	Between Wildwood Park Marina and Villa Angela Beach	41º 35’ 2.87” 81º 34’ 16.67” to 41º 35’ 20.64” 81º 33’ 51.61”		AOC
Lake Erie off Lakewood (FTCS-12)	Between Rocky River and Lakewood Park	41º 29’ 31.12” 81º 50’ 17.53” to 41º 29’ 48.99” 81º 47’ 39.69” to 41º 29’ 53” 81º 49’ 12”		Reference
Chagrin River at Daniels Park (FTCS-13)	Upstream of the confluence with the East Branch		5.1	Reference

Appendix B. Study Map



Appendix C. Fish Species Analyzed

1. Steelhead Trout (*Oncorhynchus mykiss*)
2. Northern Pike (*Esox lucius*)
3. Northern Hog Sucker (*Hypentelium nigricans*)
4. Golden Redhorse (*Moxostoma erythrurum*)
5. Common White Sucker (*Catostomus commersoni*)
6. Common Carp (*Cyprinus carpio*)
7. Channel Catfish (*Ictalurus punctatus*)
8. Yellow Bullhead (*Ictalurus natalis*)
9. Brown Bullhead (*Ictalurus nebulosus*)
10. White Perch (*Morone americana*)
11. White Bass (*Morone chrysops*)
12. Northern Rock Bass (*Ambloplites rupestris*)
13. Largemouth Bass (*Micropterus salmoides*)
14. Smallmouth Bass (*Micropterus dolomieui*)
15. Northern Bluegill Sunfish (*Lepomis macrochirus*)
16. Pumpkinseed Sunfish (*Lepomis gibbosus*)
17. Yellow Perch (*Perca flavescens*)
18. Walleye (*Sander vitreus*)
19. Freshwater Drum (*Aplodinotus grunniens*)

Appendix D. Completed Collection Forms and Mercury and Selenium Results

2005 Fish Tissue Study Sample Form							
Date:	9/28/2005 & 10/6/05						
Location:	Cuyahoga River at Shalersville (FTCS-01)						
Collection Method:	Longline Electrofishing						
Names of Samplers:	Zablotny, Crestani, Maichle, Hothem/ JR, TZ, CZ, RM, SH, MP, DS						
Weather:	Sunny, 55-70 degrees						
Comments:							
Composite Fillet Samples							
Sample #	**Species**	**Length (mm)**	**Weight (g)**	**DELTs**	**Processed**	**Age**	**Hg (mg/kg)**
Bottom Feeder Species 1							
092805-0101 R-0508230014-01	Common White Sucker	390	612		10/11/2005	3	.287
092805-0102 R-0508230014-02		345	350			3	
092805-0103 R-0508230014-03		450	675			4	
092805-0104 R-0508230014-04		430	800			4	
Bottom Feeder Species 2							
092805-0105 R-0508230015-01	Golden Redhorse	333	425		10/11/2005	3	.147
092805-0106 R-0508230015-02		340	500			3	
092805-0107 R-0508230015-03		330	410			3	
092805-0108 R-0508230015-04		390	590	D-tail (emaciated)		4	
Sport Fish Species 1							
092805-0109 R-0508230016-01	Northern Pike	495	800		10/18/2005	4	.172
092805-0110 R-0508230016-02		520	875			4	

Sport Fish Species 2							
092805-0111 R-0508230017-01	Northern Rock Bass	224	260		10/12/2005	5	.107
092805-0112 R-0508230017-02		195	170			4	
092805-0113 R-0508230017-03		185	130			3	
092805-0114 R-0508230017-04		165	100			3	
092805-0115 R-0508230017-05		167	102			3	

Whole Body Samples								
Sample #	**Species**	**Length (mm)**	**Weight (g)**	**DELTs**	**Processed**	**Age**	**Hg (mg/kg)**	**Se (mg/kg)**
Sport Fish Species								
092805-0116 R-0508230018	Smallmouth Bass	285	350		10/18/2005	3	0.207	5.38
092805-0117 R-0508230019	Northern Rock Bass	168	102		10/12/2005	3	0.057	11.59
092805-0118 R-0508230020	Northern Rock Bass	160	90		10/12/2005	3	0.048	6.68
092805-0119 R-0508230021	Northern Rock Bass	150	85		10/12/2005	3	0.059	6.86
100605-0101 R-0508230022	Northern Rock Bass	183	125		10/12/2005	3	0.098	6.63
100605-0102 R-0508230023	Northern Rock Bass	178	114		10/12/2005	3	0.081	7.19
100605-0103 R-0508230024	Northern Rock Bass	184	134		10/12/2005	3	0.09	6.91
100605-0104 R-0508230025	Northern Rock Bass	220	219		10/18/2005	4	0.146	5.03
100605-0105 R-0508230026	Northern Rock Bass	184	132		10/18/2005	3	0.05	10.03
100605-0106 R-0508230027	Northern Rock Bass	158	76		10/18/2005	2	0.122	11.2
100605-0107 R-0508230028	Northern Rock Bass	186	132		10/18/2005	4	0.096	5.96
100605-0108 R-0508230029	Northern Rock Bass	156	72		10/18/2005	3	0.111	8.89
Blue Gill/Sunfish Species								
100605-0109 R-0508230030	Northern Bluegill Sunfish	142	61		10/12/2005	3	0.101	9.19
100605-0110 R-0508230031	Northern Bluegill Sunfish	161	67		10/12/2005	4	0.093	5.19

Other Fish Collected						
Northern Hog Sucker						
Greenside Darter						
Pickerel						
Logperch Darter						
Trout						

underlined result = average of 2 duplicate samples

2005 Fish Tissue Study Sample Form							
Date:	9/21/2005						
Location:	Cuyahoga River Upstream of Akron- Ohio Edison Dam Pool (FTCS-02)						
Collection Method:	Boat Electrofishing						
Names of Samplers:	Rhoades, Hothem, Hillman, Fry, Zablotny, Crestani, Tuckerman						
Weather:	Clear, Sunny, 60-80 degrees						
Comments:							
Composite Fillet Samples							
Sample #	**Species**	**Length (mm)**	**Weight (g)**	**DELTs**	**Processed**	**Age**	**Hg (mg/kg)**
Bottom Feeder Species 1							
092105-0201 R-0508310002-01	Common Carp	500	680		9/27/2005	6	.173
092105-0202 R-0508310002-02		530	839			7	
092105-0203 R-0508310002-03		540	989			7	
Sport Fish Species 1							
092105-0204 R-0508310004-01	Largemouth Bass	230	509		9/27/2005	3	.219
092105-0205 R-0508310004-02		310	412			4	

Whole Body Samples								
Sample #	**Species**	**Length (mm)**	**Weight (g)**	**DELTs**	**Processed**	**Age**	**Hg (mg/kg)**	**Se (mg/kg)**
Sport Fish Species								
092105-0206 R-0508310006	Smallmouth Bass	240	207		9/27/2005	3	0.185	3.92
092105-0207 R-0508310007	Northern Bluegill Sunfish	130	40		9/27/2005	3	0.075	4.93
092105-0208 R-0508310008	Northern Bluegill Sunfish	122	30		9/26/2005	2	0.056	6.2
092105-0209 R-0508310009	Northern Bluegill Sunfish	110	30		9/27/2005	2	0.108	6.71
092105-0210 R-0508310010	Northern Bluegill Sunfish	130	30		9/27/2005	3	0.035	5.07
092105-0211 R-0508310011	Northern Bluegill Sunfish	132	40		9/27/2005	3	0.055	4.37
092105-0212 R-0508310012	Northern Bluegill Sunfish	130	35		9/27/2005	3	0.061	5.74
092105-0213 R-0508310013	Northern Bluegill Sunfish	124	30		9/26/2005	2	0.027	5.2
092105-0214 R-0508310014	Northern Bluegill Sunfish	138	35		9/27/2005	3	0.05	4.05
092105-0215 R-0508310015	Northern Bluegill Sunfish	118	30		9/27/2005	2	0.083	5.84
092105-0216 R-0508310016	Northern Bluegill Sunfish	132	42		9/27/2005	3	0.058	4.32
092105-0217 R-0508310017	Northern Bluegill Sunfish	138	48		9/26/2005	3	0.088	5.16

Other Fish Collected						
Gizzard Shad						
White Perch						

underlined result = average of 2 duplicate samples

2005 Fish Tissue Study Sample Form	
Date:	9/22/2005
Location:	Cuyahoga River Upstream of Akron WWTP (FTCS-03)
Collection Method:	Boat Electrofishing
Names of Samplers:	Rhoades, Hillman, Fry, Maichle, Hothem, Zablotny
Weather:	Clear, Sunny, 65-80 degrees
Comments:	

Composite Fillet Samples							
Sample #	**Species**	**Length (mm)**	**Weight (g)**	**DELTs**	**Processed**	**Age**	**Hg (mg/kg)**
Bottom Feeder Species 1							
092205-0301 R-0509140011-01	Northern Hog Sucker	250	200		9/26/2005	2	.108
092205-0302 R-0509140011-02		265	230			3	
092205-0303 R-0509140011-03		300	310			3	
092205-0304 R-0509140011-04		260	220			3	
Bottom Feeder Species 2							
092205-0305 R-0509140012-01	Common White Sucker	330	350		9/26/2005	3	.108
092205-0306 R-0509140012-02		290	262			2	
Sport Fish Species 1							
092205-0307 R-0509140013-01	Smallmouth Bass	425	1025		9/27/2005	6	.244
092205-0308 R-0509140013-02		385	752			5	
092205-0309 R-0509140013-03		370	580			5	

Whole Body Samples								
Sample #	**Species**	**Length (mm)**	**Weight (g)**	**DELTs**	**Processed**	**Age**	**Hg (mg/kg)**	**Se (mg/kg)**
Sport Fish Species								
092205-0310 R-0509140015	Common Carp	570	2500		10/20/2005	7	0.067	4.94
092205-0311 R-0509140016	Yellow Bullhead	200	100		9/27/2005	-	0.034	4.76

underlined result = average of 2 duplicate samples

2005 Fish Tissue Study Sample Form							
Date:	10/6/2005 & 10/14/05						
Location:	Cuyahoga River Downstream of Akron WWTP (FTCS-04)						
Collection Method:	Longline & Boat Electrofishing						
Names of Samplers:	Rhoades, Zablotny, Zamborsky, Maichle, Hothem, Plona, Tuckerman, Toledo						
Weather:	Sunny, 80 degrees & Foggy, 55-60 degrees						
Comments:							
Composite Fillet Samples							
Sample #	**Species**	**Length (mm)**	**Weight (g)**	**DELTs**	**Processed**	**Age**	**Hg (mg/kg)**
Bottom Feeder Species 1							
100605-0401 R-0509160001-01	Common White Sucker	245	142		10/12/2005	2	.107
100605-0402 R-0509160001-02		319	228			3	
100605-0403 R-0509160001-03		260	190			2	
100605-0404 R-0509160001-04		250	162	L-mouth		2	
100605-0405 R-0509160001-05		254	172			2	
Bottom Feeder Species 2							
100605-0406 R-0509160002-01	Northern Hog Sucker	276	262		10/12/2005	3	.286
100605-0407 R-0509160002-02		290	334			3	
100605-0408 R-0509160002-03		270	250			4	
100605-0409 R-0509160002-04		264	224			3	
100605-0410 R-0509160002-05		250	179			3	
Sport Fish Species 1							
100605-0411R-0509160003-01	Smallmouth Bass	342	526		10/14/2005	5	.078
101405-0401 R-0509160003-02		260	238			3	
101405-0402 R-0509160003-03		271	252			3	
101405-0403 R-0509160003-04		302	368			4	
101405-0404 R-0509160003-05		270	303			3	

Bottom Feeder Species 3							
101405-0405 R-0509160004-01	Common Carp	617	3700		10/19/2005	7	.196
101405-0406 R-0509160004-02		632	4150			regen	
101405-0407 R-0509160004-03		621	3725			9	

Whole Body Samples								
Sample #	**Species**	**Length (mm)**	**Weight (g)**	**DELTs**	**Processed**	**Age**	**Hg (mg/kg)**	**Se (mg/kg)**
Sport Fish Species								
101405-0408 R-0509160005	Smallmouth Bass	225	150		10/14/2005	2	0.1	3.96

Other Fish Collected						
Yellow Bullhead						
Gizzard Shad						

underlined result = average of 2 duplicate samples

2005 Fish Tissue Study Sample Form	
Date:	10/13/2005
Location:	Cuyahoga River Near Route 82 (FTCS-05)
Collection Method:	Boat Electrofishing
Names of Samplers:	Tuckerman, Toledo, Plona, Zamborsky, Rhoades, Hothem, Crestani, Zablotny, Maichle
Weather:	Cloud- 55-60 degrees
Comments:	

Composite Fillet Samples							
Sample #	**Species**	**Length (mm)**	**Weight (g)**	**DELTs**	**Processed**	**Age**	**Hg (mg/kg)**
Bottom Feeder Species 1							
101305-0501 R-0509160029-01	Common Carp	550	2300		10/18/2005	7	.261
101305-0502 R-0509160029-02		480	2000			6	
101305-0503 R-0509160029-03		450	1400			6	

Bottom Feeder Species 2							
101305-0504 R-0509160030-01	Common White Sucker	300	250		10/14/2005	3	.118
101305-0505 R-0509160030-02		300	260			3	
101305-0506 R-0509160030-03		280	195			2	
101305-0507 R-0509160030-04		290	225			3	
101305-0508 R-0509160030-05		300	225			3	

Sport Fish Species 1							
101305-0509 R-0509160032-01	Smallmouth Bass	395	900		10/14/2005	5	.428
101305-0510 R-0509160032-02		320	450			3	

Whole Body Samples								
Sample #	**Species**	**Length (mm)**	**Weight (g)**	**DELTs**	**Processed**	**Age**	**Hg (mg/kg)**	**Se (mg/kg)**
Sport Fish Species								
101305-0511 R-0509160033	Northern Rock Bass	185	110		10/14/2005	3	0.179	5.18
101305-0512 R-0509160034	Northern Rock Bass	200	172		10/14/2005	4	0.096	4.61
101305-0513 R-0509160035	Northern Rock Bass	200	150		10/14/2005	4	0.178	3.75
101305-0514 R-0509160036	Northern Rock Bass	260	360		10/14/2005	regen	0.204	3.2

underlined result = average of 2 duplicate samples

2005 Fish Tissue Study Sample Form							
Date:	9/8/2005 & 10/4/05 & 10/17/05						
Location:	Cuyahoga River at Southwest Interceptor (FTCS-06)						
Collection Method:	Boat Electrofishing						
Names of Samplers:	Rhoades, Hothem, Zablotny, Bishop, Crestani, Zamborsky, Hamski, Maichle						
Weather:	Partly cloudy, 78 degrees / Sunny 82 degrees/ Partly cloudy 50 degrees						
Comments:	Start: 41 25.591N 81 39.909W End: 41 25.986N 81 39.954W						
Composite Fillet Samples							
Sample #	**Species**	**Length (mm)**	**Weight (g)**	**DELTs**	**Processed**	**Age**	**Hg (mg/kg)**
Bottom Feeder Species 1							
090805-0601 R-0508290002-01	Channel Catfish	505	1325		9/8/2005	-	.142
090805-0602 R-0508290002-02		525	1600			-	
090805-0603 R-0508290002-03		470	1300			-	
Bottom Feeder Species 2							
090805-0604 R-0508290003-01	Common Carp	485	1500		9/8/2005	8	.151
090805-0605 R-0508290003-02		505	1925			9	
090805-0606 R-0508290003-03		485	1500			8	
Sport Fish Species 1							
090805-0607 R-0508290004-01	Smallmouth Bass	325	500		9/8/2005	4	.108
090805-0608 R-0508290004-02		321	475	Dorsal lesion		4	
090805-0609 R-0508290004-03		302	425			4	
090805-0610 R-0508290004-04		310	400			4	
Sport Fish Species 2							
100405-0601 R-0510140001-01	White Perch	201	122		10/11/2005	3	NA
100405-0602 R-0510140001-02		174	72			2	
100405-0603 R-0510140001-03		176	72			2	

Whole Body Samples								
Sample #	**Species**	**Length (mm)**	**Weight (g)**	**DELTs**	**Processed**	**Age**	**Hg (mg/kg)**	**Se (mg/kg)**
Sport Fish Species								
090805-0611 R-0508290006	Steelhead Trout	380	600		9/19/2005	1	0.058	5.4
090805-0612 R-0508290007	Smallmouth Bass	265	300		9/26/2005	3	0.075	5.88
090805-0613 R-0508290008	Smallmouth Bass	285	300		9/19/2005	3	0.086	5.03
090805-0614 R-0508290009	Smallmouth Bass	270	275		9/19/2005	3	0.07	5.68
090805-0615 R-0508290010	Smallmouth Bass	280	300		9/26/2005	3	0.102	5.33
090805-0616 R-0508290011	Smallmouth Bass	267	300		9/19/2005	2	0.073	6.27
100405-0604 R-0510140002	Smallmouth Bass	251	206		10/18/2005	3	0.08	5.33
100405-0605 R-0510140003	Smallmouth Bass	195	95		10/19/2005	1	0.125	NA
101705-0601 R-0510140004	Northern Rock Bass	176	110		-	-		
Blue Gill/Sunfish Species								
090805-0617 R-0508290018	Northern Bluegill Sunfish	125	40		9/19/2005	2	0.029	5.41
090805-0618 R-0508290019	Northern Bluegill Sunfish	120	38		9/19/2005	2	0.066	4.97
090805-0619 R-0508290020	Northern Bluegill Sunfish	115	30		9/26/2005	2	0.03	4.47
090805-0620 R-0508290021	Northern Bluegill Sunfish	105	24		9/19/2005	2	0.029	5.27
090805-0621 R-0508290022	Northern Bluegill Sunfish	92	20		9/19/2005	1	0.035	5.08
101705-0602 R-0510140008	Northern Bluegill Sunfish	133	52		10/18/2005	regen	0.054	4.84
101705-0603 R-0510140009	Northern Bluegill Sunfish	140	53		10/18/2005	3	0.087	3.31
101705-0604 R-0510140010	Northern Bluegill Sunfish	136	50		10/18/2005	2	0.112	6.65

Other Fish Collected						
Shorthead Redhorse						
Smallmouth Buffalofish						
Common White Sucker						
Quilback Carpsucker						
Gizzard Shad						
White Perch						
Northern Hog Sucker						
Spotfin Shiner						
Yellow Bullhead						
Emerald Shiner						
Bluntnose Minnow						

underlined result = average of 2 duplicate samples

2005 Fish Tissue Study Sample Form							
Date:	10/4/2005 & 10/17/05						
Location:	Cuyahoga River Navigation Channel (FTCS-07)						
Collection Method:	Boat Electrofishing						
Names of Samplers:	Zablotny, Zamborsky, Crestani, Maichle, Hothem/ JR, TZ, SH						
Weather:	Sunny, 65-82 degrees/ Partly cloudy 50 degrees						
Comments:	River DO 6.6 mg/L						
Composite Fillet Samples							
Sample #	**Species**	**Length (mm)**	**Weight (g)**	**DELTs**	**Processed**	**Age**	**Hg (mg/kg)**
Bottom Feeder Species 1							
100405-0701 R-0509300001-01	Common Carp	500	1875		10/11/2005	7	.066
Sport Fish Species 1							
100405-0702 R-0509300003-01	Largemouth Bass	320	550		10/14/2005	3	.356
100405-0703 R-0509300003-02		308	350	Tail Lesion		3	
100405-0704 R-0509300003-03		270	275			2	

Whole Body Samples								
Sample #	**Species**	**Length (mm)**	**Weight (g)**	**DELTs**	**Processed**	**Age**	**Hg (mg/kg)**	**Se (mg/kg)**
Sport Fish Species								
100405-0705 R-0509300005	Yellow Perch	200	75		10/11/2005	2	0.076	4.63
100405-0706 R-0509300006	Largemouth Bass	152	50		10/11/2005	2	0.084	4.39
100405-0707 R-0509300007	Largemouth Bass	142	42		10/11/2005	1	0.078	5.32
100405-0708 R-0509300008	Largemouth Bass	185	90		10/11/2005	2	0.057	4.11
101705-0701 R-0509300009	Largemouth Bass	263	220		10/18/2005	2	0.059	4.07

underlined result = average of 2 duplicate samples

2005 Fish Tissue Study Sample Form							
Date:	8/18/2005						
Location:	Lake Erie West Harbor (FTCS-08)						
Collection Method:	Boat Electrofishing						
Names of Samplers:	Rhoades, Zablotny, Crestani, Hothem, Maichle, Day						
Weather:	Sunny, 80 degrees						
Comments:							
Composite Fillet Samples							
Sample #	**Species**	**Length (mm)**	**Weight (g)**	**DELTs**	**Processed**	**Age**	**Hg (mg/kg)**
Bottom Feeder Species 1							
081805-0801 L-05081600017-01	Carp	645	4309		9/2/2005	11	.258
081805-0802 L-05081600017-02		610	3175			10	
081805-0803 L-05081600017-03		600	2300			8	
Bottom Feeder Species 2							
081805-0804 L-05081600020-01	Brown Bullhead	300	470		9/6/2005	6	.825
081805-0805 L-05081600020-02		310	532			7	
081805-0806 L-05081600020-03		260	322			4	
Sport Fish Species 1							
081805-0807 L-05081600019-01	Freshwater Drum	545	2300		9/6/2005	8	.818
081805-0808 L-05081600019-02		575	2500			9	
081805-0809 L-05081600019-03		545	2625			8	
Sport Fish Species 2							
081805-0810 L-05081600018-01	Largemouth Bass	380	1050		9/6/2005	5	.784
081805-0811 L-05081600018-02		395	1225			5	
081805-0812 L-05081600018-03		398	1050			5	

Whole Body Samples								
Sample #	**Species**	**Length (mm)**	**Weight (g)**	**DELTs**	**Processed**	**Age**	**Hg (mg/kg)**	**Se (mg/kg)**
Sport Fish Species								
081805-0813 L-0508160044	Northern Rock Bass	225	240		9/9/2005	4	0.114	4.46
081805-0814 L-0508160021	Northern Rock Bass	250	300		9/7/2005	5	0.244	4.09
081805-0815 L-0508160022	Northern Rock Bass	210	230		9/9/2005	5	0.216	4.28
081805-0816 L-0508160023	Northern Rock Bass	185	130		9/9/2005	4	0.398	3.51
081805-0817 L-0508160024	Northern Rock Bass	186	142		9/9/2005	4	0.105	4.07
081805-0818 L-0508160025	Northern Rock Bass	155	90		9/7/2005	4	0.115	3.8
081805-0819 L-0508160026	Northern Rock Bass	200	172		9/9/2005	5	0.155	4.16
081805-0820 L-0508160027	Northern Rock Bass	215	212		9/9/2005	5	0.256	4.09
081805-0821 L-0508160028	Northern Rock Bass	222	218		9/20/2005	5	0.255	3.11
081805-0822 L-0508160029	Northern Rock Bass	197	150		9/9/2005	4	0.133	4.1
081805-0823 L-0508160030	Northern Rock Bass	155	84		9/9/2005	3	0.141	4.22
081805-0824 L-0508160031	Northern Rock Bass	153	82		9/20/2005	1	0.108	3.41
Blue Gill/Sunfish Species								
081805-0825 L-0508160032	Pumpkinseed Sunfish	119	32		9/7/2005	3	0.101	3.79
081805-0826 L-0508160033	Pumpkinseed Sunfish	110	22		9/9/2005	2	0.043	3.36
081805-0827 L-0508160034	Pumpkinseed Sunfish	102	20		9/9/2005	2	0.015	3.74
081805-0828 L-0508160035	Pumpkinseed Sunfish	109	26		9/7/2005	2	NA	
081805-0829 L-0508160036	Pumpkinseed Sunfish	115	30		9/20/2005	2	0.045	3.87
081805-0830 L-0508160037	Golden Redhorse	455	1025		9/20/2005	5	0.171	3.56
081805-0831 L-0508160038	Golden Redhorse	505	1100	Eroded tail	9/20/2005	regen	0.287	3.43
081805-0832 L-0508160039	Golden Redhorse	500	1175		9/20/2005	5	0.214	3.88
081805-0833 L-0508160040	Golden Redhorse	410	750		9/20/2005	5	0.111	3.76

Other Fish Collected						
Gizzard Shad						
Largemouth Bass						
Smallmouth Bass						
Round Goby						
Yellow Perch (YOY)						

underlined result = average of 2 duplicate samples

2005 Fish Tissue Study Sample Form							
Date:	8/18/2005						
Location:	Lake Erie East Harbor (FTCS-09)						
Collection Method:	Boat Electrofishing						
Names of Samplers:	Rhoades, Zablotny, Crestani, Hothem, Maichle, Day						
Weather:	Sunny, 80 degrees						
Comments:							
Composite Fillet Samples							
Sample #	**Species**	**Length (mm)**	**Weight (g)**	**DELTs**	**Processed**	**Age**	**Hg (mg/kg)**
Bottom Feeder Species 1							
081805-0901 L-0508160003-01	Yellow Bullhead	280	325		9/6/2005	5	.507
081805-0902 L-0508160003-02		250	225			5	
081805-0903 L-0508160003-03		300	325			8	
Bottom Feeder Species 2							
081805-0904 L-0508160002-01	Common Carp	1135	6237		9/2/2005	13	.294

Sport Fish Species 1							
081805-0905 L-0508160001-01	Freshwater Drum	545	2225		9/6/2005	8	.353
081805-0906 L-0508160001-02		555	2300			9	
081805-0907 L-0508160001-03		530	2000			8	

Sport Fish Species 2							
081805-0908 L-0508160004-01	Northern Rock Bass	215	212		9/6/2005	5	.285
081805-0909 L-0508160004-02		215	200			3	
081805-0910 L-0508160004-03		215	248			5	
081805-0911 L-0508160004-04		230	252			4	
081805-0912 L-0508160004-05		200	192			3	

Whole Body Samples								
Sample #	**Species**	**Length (mm)**	**Weight (g)**	**DELTs**	**Processed**	**Age**	**Hg (mg/kg)**	**Se (mg/kg)**
Sport Fish Species								
081805-0913 L-0508160005	Pumpkinseed Sunfish	135	48		9/9/2005	3	0.11	6.69
081805-0914 L-0508160006	Pumpkinseed Sunfish	130	50		9/9/2005	3	0.363	4.58
081805-0915 L-0508160007	Pumpkinseed Sunfish	120	42		9/9/2005	2	0.072	4.46
081805-0916 L-0508160008	Pumpkinseed Sunfish	125	40		9/9/2005	3	0.051	5.13
081805-0917 L-0508160009	Pumpkinseed Sunfish	112	32		9/7/2005	2	0.078	5.83
081805-0918 L-0508160010	Pumpkinseed Sunfish	110	32		9/9/2005	2	0.093	4.06
081805-0919 L-0508160011	Pumpkinseed Sunfish	105	24		9/20/2005	2	0.24	4.37
081805-0920 L-0508160012	Pumpkinseed Sunfish	95	24		9/20/2005	1	0.041	4.27
081805-0921 L-0508160013	Pumpkinseed Sunfish	95	20		9/9/2005	2	0.063	4.46
081805-0922 L-0508160014	Pumpkinseed Sunfish	90	22		9/9/2005	2	0.051	3.61
081805-0923 L-0508160015	Pumpkinseed Sunfish	94	20		9/9/2005	2	0.041	2.87
081805-0924 L-0508160016	Pumpkinseed Sunfish	95	22		9/9/2005	2	0.07	6.04

Other Fish Collected						
Largemouth Bass						
Smallmouth Bass						
Round Goby						
Yellow Perch						
Logperch Darter						
Gizzard Shad						
White Perch						

underlined result = average of 2 duplicate samples

2005 Fish Tissue Study Sample Form							
Date:	8/24/2005						
Location:	Lake Erie Eastlake (FTCS-10)						
Collection Method:	Boat Electrofishing						
Names of Samplers:	Crestani, Hothem, Plona, Rhoades, Zablotny						
Weather:	sunny 55-80 degrees						
Comments:	41 deg 40.411/81 deg 26.837 to 41 deg 40.640/81 deg 26.207						
Composite Fillet Samples							
Sample #	**Species**	**Length (mm)**	**Weight (g)**	**DELTs**	**Processed**	**Age**	**Hg (mg/kg)**
Bottom Feeder Species 1							
082405-1001 L-0508190009-01	Common Carp	500	1650		9/7/2005	7	.290
082405-1002 L-0508190009-02		493	1600			7	
082405-1003 L-0508190009-03		485	1525			7	
Sport Fish Species 1							
082405-1004 L-0508190011-01	Largemouth Bass	385	1025		9/7/2005	4	.553
082405-1005 L-0508190011-02		398	1025			5	
082405-1006 L-0508190011-03		410	1225			6	

Sport Fish Species 2							
082405-1007 L-0508190012-01	Freshwater Drum	535	2300		9/7/2005	8	NA
082405-1008 L-0508190012-02		555	2375			10	
082405-1009 L-0508190012-03		558	2100			10	

Whole Body Samples								
Sample #	**Species**	**Length (mm)**	**Weight (g)**	**DELTs**	**Processed**	**Age**	**Hg (mg/kg)**	**Se (mg/kg)**
Sport Fish Species								
082405-1010 L-0508190013	Northern Bluegill Sunfish	170	120		10/18/2005	3	0.074	4.37
082405-1011 L-0508190014	Northern Bluegill Sunfish	188	140		9/27/2005	4	0.09	4.7
082405-1012 L-0508190015	Northern Bluegill Sunfish	180	118		9/7/2005	4	0.156	4.37
082405-1013 L-0508190016	Northern Bluegill Sunfish	191	160		10/18/2005	4	0.147	4.25
082405-1014 L-0508190017	Northern Bluegill Sunfish	168	90		9/27/2005	3	0.071	4.2
082405-1015 L-0508190018	Northern Bluegill Sunfish	178	120		9/27/2005	3	0.309	4.99
082405-1016 L-0508190019	Northern Bluegill Sunfish	173	100		9/27/2005	3	0.111	4.37
082405-1017 L-0508190020	Northern Bluegill Sunfish	169	122		9/7/2005	3	0.188	4.46
082405-1018 L-0508190021	Northern Bluegill Sunfish	174	120	Parasite- tail	10/18/2005	3	0.236	4.31
082405-1019 L-0508190022	Northern Bluegill Sunfish	181	150		9/27/2005	3	0.198	4.23
082405-1020 L-0508190023	Northern Bluegill Sunfish	178	114		9/7/2005	4	0.149	3.6
082405-1021 L-0508190024	Northern Bluegill Sunfish	168	112		9/27/2005	3	0.107	3.53
Other Fish Collected								
White Perch								
Golden Redhorse								
White Bass								
Northern Rock Bass								

underlined result = average of 2 duplicate samples

2005 Fish Tissue Study Sample Form	
Date:	8/15/2005
Location:	Lake Erie off Wildwood (FTCS-11)
Collection Method:	Boat Electrofishing
Names of Samplers:	Rhoades, Zablotny, Rogers, Plona, Hothem
Weather:	Sunny, 80 degrees
Comments:	

Composite Fillet Samples							
Sample #	**Species**	**Length (mm)**	**Weight (g)**	**DELTs**	**Processed**	**Age**	**Hg (mg/kg)**
Bottom Feeder Species 1							
081605-1101 L-0508150001-01	Common Carp	630	3450		9/2/2005	10	.169
081605-1102 L-0508150001-02		590	3500			9	
081605-1103 L-0508150001-03		630	4225	D-tail		8	
Bottom Feeder Species 2							
081605-1104 L-0508150002-01	Brown Bullhead	280	380		9/7/2005	3	.110
081605-1105 L-0508150002-02		310	500			-	
081605-1106 L-0508150002-03		300	440			4	
081605-1107 L-0508150002-04		330	512			3	
081605-1108 L-0508150002-05		328	482			3	
Sport Fish Species 1							
081605-1109 L-0508150003-01	Yellow Perch	245	214		9/6/2005	5	.135
081605-1110 L-0508150003-02		220	122			4	
081605-1111 L-0508150003-03		195	102			3	
081605-1112 L-0508150003-04		201	122			3	

Sport Fish Species 2							
081605-1113 L-0508150004-01	Freshwater Drum	600	3225		9/6/2005	9	.385
081605-1114 L-0508150004-02		420	1200	Leech		7	

Whole Body Samples								
Sample #	**Species**	**Length (mm)**	**Weight (g)**	**DELTs**	**Processed**	**Age**	**Hg (mg/kg)**	**Se (mg/kg)**
Sport Fish Species								
081605-1115 L-0508150005	Walleye	565	1675	Slight fungus	10/19/2005	6	0.179	4.47

Other Fish Collected						
Goldfish						
White Perch						
Northern Rock Bass						
Emerald Shiner						
Largemouth Bass						
White Sucker						
Smallmouth Bass						
Gizzard Shad						
Golden Shiner						
Pumpkinseed Sunfish						
Redhorse						
Yellow Perch Fry						

underlined result = average of 2 duplicate samples

2005 Fish Tissue Study Sample Form							
Date:	8/16/2005 (Carp) 8/18/2005 (All Others)						
Location:	Lake Erie off Lakewood (FTCS-12)						
Collection Method:	Boat Electrofishing, Rod/Reel						
Names of Samplers:	Rhoades, Zablotny, Rogers, Plona, Hothem/ Rhoades						
Weather:	Sunny, 80 degrees						
Comments:							
Composite Fillet Samples							
Sample #	**Species**	**Length (mm)**	**Weight (g)**	**DELTs**	**Processed**	**Age**	**Hg (mg/kg)**
Bottom Feeder Species 1							
081605-1201 L-0508150017-01	Common Carp	520	2200		9/2/2005	8	.121
081605-1202 L-0508150017-02		510	1800			6	
Sport Fish Species 1							
081805-1201 L-0508190001-01	Walleye	395	575		9/2/2005	3	.238
081805-1202 L-0508190001-02		393	575			3	
081805-1203 L-0508190001-03		448	775			4	
Sport Fish Species 2							
081805-1204 L-0508190002-01	Freshwater Drum	414	875		9/2/2005	5	.118
081805-1205 L-0508190002-02		412	1000			5	
081805-1206 L-0508190002-03		480	1600			8	

Whole Body Samples								
Sample #	**Species**	**Length (mm)**	**Weight (g)**	**DELTs**	**Processed**	**Age**	**Hg (mg/kg)**	**Se (mg/kg)**
Sport Fish Species								
081805-1207 L-0508190003	Walleye	560	1500		10/20/2005	5	0.186	5.9
081805-1208 L-0508190004	Walleye	355	420		9/2/2005	3	0.19	7.25
081805-1209 L-0508190005	Walleye	380	474		9/2/2005	3	0.123	7.16
081805-1210 L-0508190006	Walleye	370	430		9/2/2005	3	0.15	6.37
081805-1211 L-0508190007	Northern Rock Bass	230	250		9/2/2005	4	0.128	6.12
081805-1212 L-0508190008	White Bass	325	500		9/2/2005	6	0.164	6.58

underlined result = average of 2 duplicate samples

2005 Fish Tissue Study Sample Form							
Date:	8/24/2005 & 10/10/05						
Location:	Chagrin River at Daniels Park (FTCS-13)						
Collection Method:	Electroshock (Longline)						
Names of Samplers:	Crestani, Hothem, Plona, Rhoades, Zablotny/ JR, SH, KC, CZ, TZ						
Weather:	sunny 55-80 degrees/ cloudy 55 degrees						
Comments:	41° 37.773/81° 24.008 to 41° 37.756 River turbid, but visibility to 2 feet						
Composite Fillet Samples							
Sample #	**Species**	**Length (mm)**	**Weight (g)**	**DELTs**	**Processed**	**Age**	**Hg (mg/kg)**
Bottom Feeder Species 1							
082405-1301 R-0508190002-01	Golden Redhorse	285	240		9/6/2005	3	
082405-1302 R-0508190002-02		312	290			4	
082405-1303 R-0508190002-03		300	254			3	.172
082405-1304 R-0508190002-04		308	290			3	
082405-1305 R-0508190002-05		305	250			4	

Bottom Feeder Species 2							
082405-1306 R-0508190003-01	Northern Hog Sucker	294	282		9/6/2005	4	.174
082405-1307 R-0508190003-02		270	210			4	
082405-1308 R-0508190003-03		250	172			3	
082405-1309 R-0508190003-04		250	164	L-Cheek		3	

Sport Fish Species 1							
082405-1310 R-0508190004-01	Smallmouth Bass	172	60		9/7/2005	2	.320
082405-1311 R-0508190004-02		180	72			2	
082405-1312 R-0508190004-03		184	90			2	
082405-1313 R-0508190004-04		170	62			2	
082405-1314 R-0508190004-05		175	62			2	

Bottom Feeder Species 3							
101005-1304 R-0510100002-01	Common Carp	565	2500		10/18/2005	8	.375
101005-1305 R-0510100002-02		610	2725	L-dorsal		9	
101005-1306 R-0510100002-03		610	2725			8	

Sport Fish Species 2							
101005-1301 R-0510100001-01	Smallmouth Bass	387	850		10/18/2005	5	.341
101005-1302 R-0510100001-02		370	742			5	
101005-1303 R-0510100001-03		361	710	D-tail		5	

Whole Body Samples								
Sample #	**Species**	**Length (mm)**	**Weight (g)**	**DELTs**	**Processed**	**Age**	**Hg (mg/kg)**	**Se (mg/kg)**
Sport Fish Species								
082405-1315 R-0508190006	Smallmouth Bass	239	180		10/18/2005	2	0.208	4.45
101005-1307 R-0510100003	Smallmouth Bass	349	604		10/18/2005	4	0.203	4.09
101005-1308 R-0510100004	Smallmouth Bass	215	142		10/11/2005	2	0.111	5.26
101005-1309 R-0510100005	Smallmouth Bass	360	572		10/20/2005	4	0.169	4.5
101005-1310 R-0510100007	Smallmouth Bass	260	220		10/11/2005	2	0.139	4.14
101005-1311 R-0510100008	Smallmouth Bass	220	130		10/11/2005	2	0.139	5.59

underlined result = average of 2 duplicate samples

2005 Fish Tissue Study Sample Form	
Date:	8/25/2005
Location:	Cuyahoga River Old River Channel (FTCS-14)
Collection Method:	Boat
Names of Samplers:	Zablotny, Zamborsky, Crestani, Hothem, Maichle
Weather:	Sunny, 80°
Comments:	

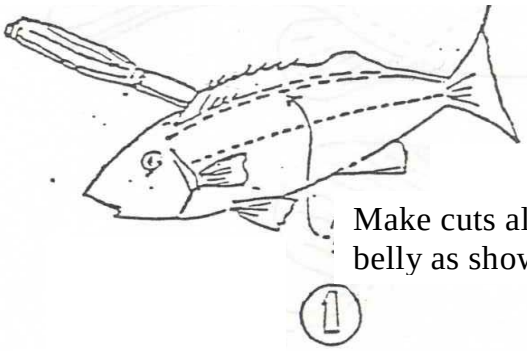
Whole Body Samples								
Sample #	**Species**	**Length (mm)**	**Weight (g)**	**DELTs**	**Processed**	**Age**	**Hg (mg/kg)**	**Se (mg/kg)**
082505-1401 R-0508300006	Common Carp	500	2325	D-tail	10/19/2005	7	.279	4.06
082505-1402 R-0508300007	Common Carp	656	3600		9/23/2005	9	.071	5.3
082505-1403 R-0508300008	Common Carp	590	2625		10/19/2005	regen	.053	4.87
082505-1404 R-0508300009	Common Carp	600	3125		9/23/2005	regen	.035	4.05
082505-1405 R-0508300010	Common Carp	540	2125		10/19/2005	7	.048	4.09

underlined result = average of 2 duplicate samples

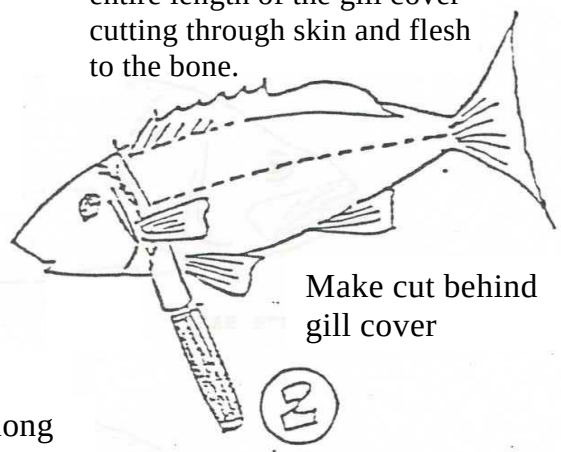
Appendix E.

Procedure to produce the "Standard Fillet"

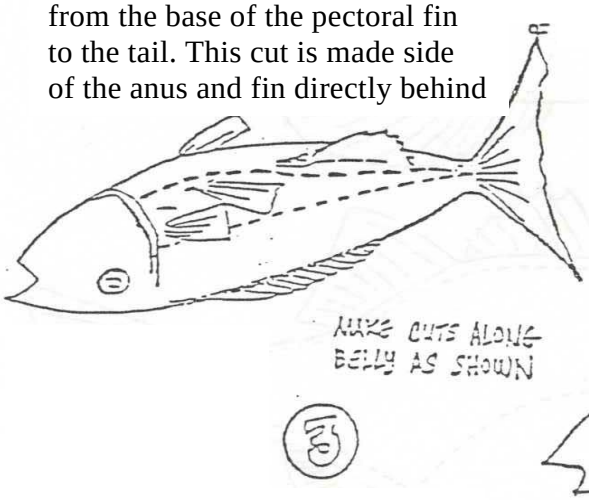
1. Make a shallow cut through the skin (on either side of the dorsal fin) from base of the head to the tail.



2. Make a cut behind the entire length of the gill cover cutting through skin and flesh to the bone.



3. Make a cut along the belly from the base of the pectoral fin to the tail. This cut is made side of the anus and fin directly behind



4. Remove the fillet and remove major bones

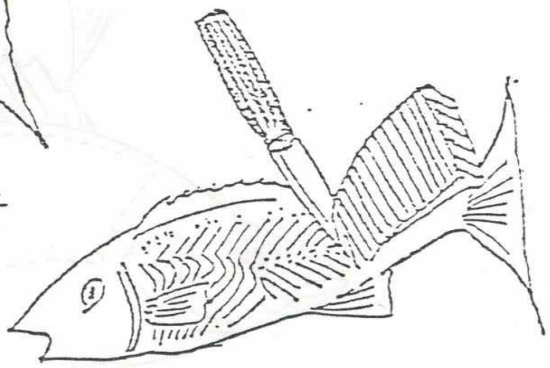
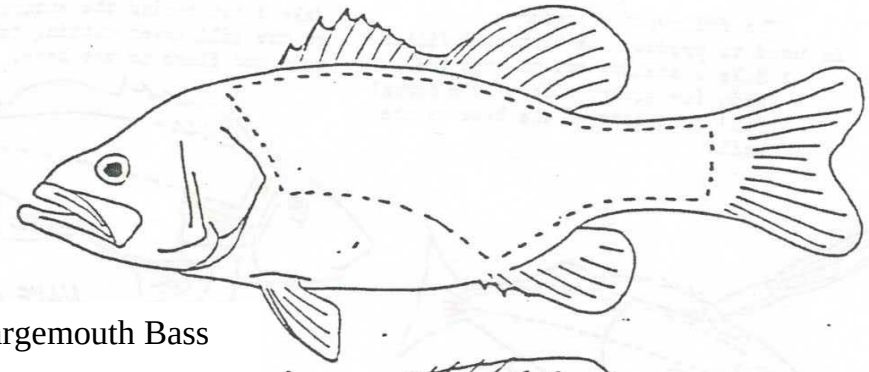
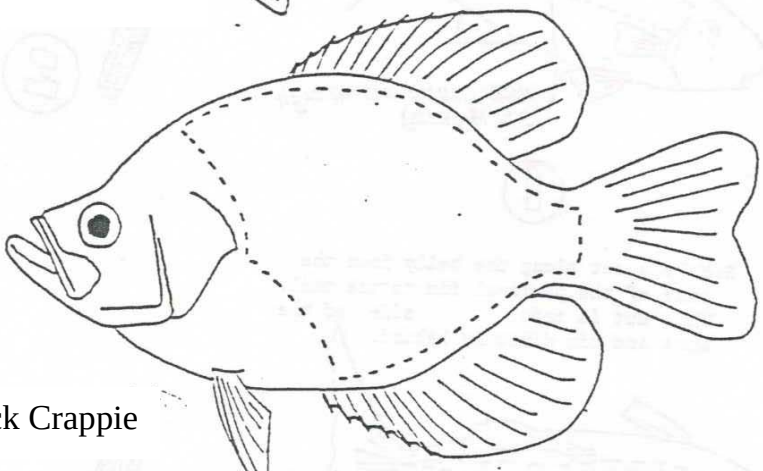


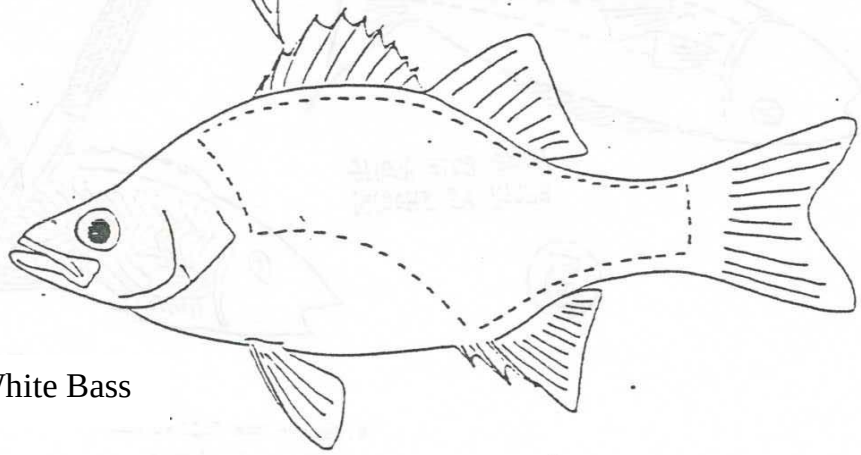
Diagram of a "Standard Fillet" for representative fish species



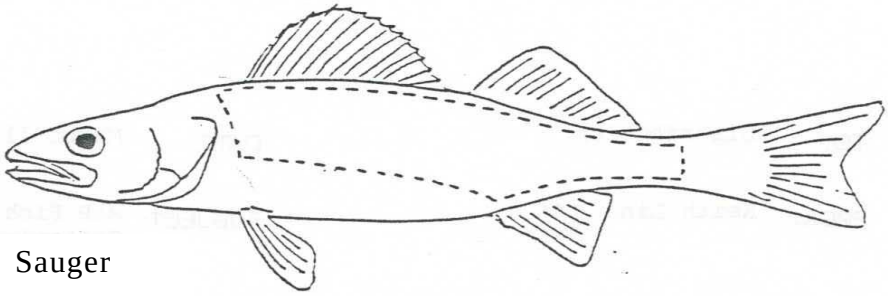
Largemouth Bass



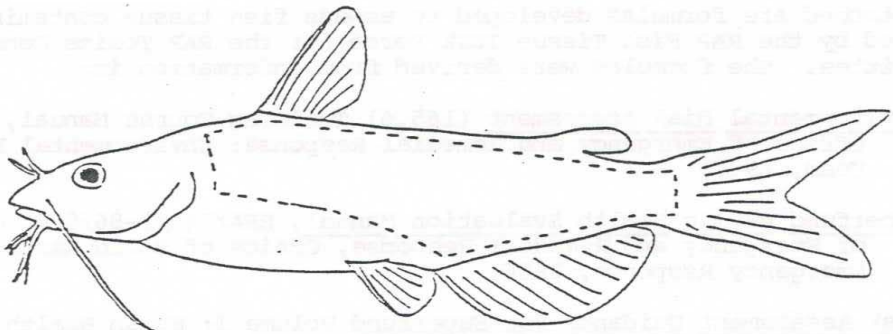
Black Crappie



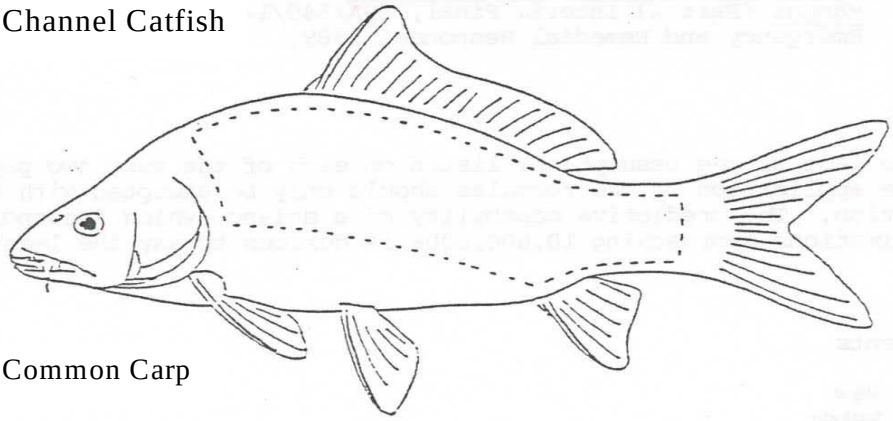
White Bass



Sauger



Channel Catfish



Common Carp

SEVERN TRENT STL®

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ANALYTICAL REPORT

EMSC

Lot #: A5J250202

Cheryl Soltis-Muth

Northeast Ohio Regional Sewer
4747 East 49th Street
Cuyahoga Heights, OH 44125

SEVERN TRENT LABORATORIES, INC.

Lois D. Ezzo
Project Manager

November 28, 2005

CASE NARRATIVE

A5J250202

The following report contains the analytical results for fifty-five biological samples submitted to STL North Canton by Northeast Ohio Regional Sewer District from the EMSC Site. The samples were received October 24, 2005 and October 26, 2005, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Cheryl Soltis-Muth on November 26, 2005. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions, please call the Project Manager, Lois D. Ezzo, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT." The total number of pages in this report is 210.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was –31.0°C.

See STL's Cooler Receipt Form for additional information.

CASE NARRATIVE (continued)

PESTICIDES-8081

Sample(s) L-0508150001, L-0508150002, L-0508150003, L-0508150004, L-0508150017, L-0508160001, L-0508160002, L-0508160004, L-0508160017, L-0508160018, L-0508160019, L-0508160020, L-0508190001, L-0508190002, L-0508190009, L-0508190011, L-0508190012, R-0508190002, R-0508190003, and R-0508190004 had elevated reporting limits due to matrix interference.

The Method Blank for batch 5306032 contained reportable amounts of contaminants, but since the samples were ND, no corrective action was necessary.

POLYCHLORINATED BIPHENYLS-8082

Batch 5305063 had RPD's outside QC criteria in the LCS/LCSD, but recoveries were within QC criteria; therefore, no corrective action was necessary.

For sample(s) R-0508230014, R-0508230015, R-0508230016, R-0508310004, R-0509140013, R-0509160003, R-0509300001, R-0509300003, L-0508150017, R-0510210003, R-0510210005, and R-0508290002, the recovery for one surrogate compound is outside acceptance criteria. Since the method criterion is that one of two surrogate compounds must meet acceptance criteria, no corrective action was required.

The % Lipids blanks associated with batch(es) 5309024 and 5305062 each had results of .3. There are no established reporting limits for this matrix.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	**Semivolatile (GC/MS)**	**Metals**
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#200004), Kansas (#E10336), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), North Carolina (#39702), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), Utah (#QUAN9), Virginia (#00011), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

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EXECUTIVE SUMMARY - Detection Highlights

A5J250202

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
R-0508230014 09/28/05 12:00 001				
Percent Lipids	0.40		%	SW846 8290
R-0508230015 09/28/05 12:00 002				
Percent Lipids	0.40		%	SW846 8290
R-0508230016 09/28/05 12:00 003				
Percent Lipids	0.40		%	SW846 8290
R-0508230017 09/28/05 12:00 004				
Percent Lipids	0.40		%	SW846 8290
R-0508310002 09/21/05 12:00 005				
Percent Lipids	1.6		%	SW846 8290
Aroclor 1254	120	33	ug/kg	SW846 8082
R-0509140011 09/22/05 12:00 007				
Percent Lipids	0.40		%	SW846 8290
Aroclor 1254	46	33	ug/kg	SW846 8082
R-0509140012 09/22/05 12:00 008				
Percent Lipids	0.80		%	SW846 8290
Aroclor 1248	59	33	ug/kg	SW846 8082
Aroclor 1260	44	33	ug/kg	SW846 8082
R-0509140013 09/22/05 12:00 009				
Aroclor 1254	200	66	ug/kg	SW846 8082
R-0509160001 10/06/05 12:00 010				
Percent Lipids	0.30		%	SW846 8290
Aroclor 1254	34	33	ug/kg	SW846 8082

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EXECUTIVE SUMMARY - Detection Highlights

A5J250202

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
R-0509160002 10/06/05 12:00 011				
Percent Lipids	0.30		%	SW846 8290
Aroclor 1254	35	33	ug/kg	SW846 8082
R-0509160003 10/06/05 12:00 012				
Percent Lipids	0.40		%	SW846 8290
R-0509160004 10/14/05 12:00 013				
Percent Lipids	2.0		%	SW846 8290
Aroclor 1248	110	33	ug/kg	SW846 8082
Aroclor 1260	250	33	ug/kg	SW846 8082
R-0509160029 10/13/05 12:00 014				
Percent Lipids	1.3		%	SW846 8290
Aroclor 1254	73	33	ug/kg	SW846 8082
R-0509160030 10/13/05 12:00 015				
Percent Lipids	0.40		%	SW846 8290
R-0509160032 10/13/05 12:00 016				
Percent Lipids	0.50		%	SW846 8290
R-0509300001 10/04/05 12:00 018				
Percent Lipids	1.6		%	SW846 8290
Aroclor 1254	76	33	ug/kg	SW846 8082
L-0508160017 08/18/05 12:00 020				
Percent Lipids	0.40		%	SW846 8290
Aroclor 1254	79	33	ug/kg	SW846 8082
L-0508160018 08/18/05 12:00 021				
Percent Lipids	0.40 B		%	SW846 8290
Aroclor 1254	41	33	ug/kg	SW846 8082

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EXECUTIVE SUMMARY - Detection Highlights

A5J250202

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
L-0508160019 08/18/05 12:00 022				
Percent Lipids	6.1 B		%	SW846 8290
Aroclor 1254	340	66	ug/kg	SW846 8082
L-0508160020 08/18/05 12:00 023				
Percent Lipids	1.1 B		%	SW846 8290
Aroclor 1254	76	33	ug/kg	SW846 8082
L-0508160002 08/18/05 12:00 024				
Percent Lipids	17 B		%	SW846 8290
Aroclor 1254	1300	160	ug/kg	SW846 8082
L-0508160001 08/18/05 12:00 025				
Percent Lipids	3.1 B		%	SW846 8290
Aroclor 1254	210	33	ug/kg	SW846 8082
L-0508160004 08/18/05 12:00 026				
Percent Lipids	8.2 B		%	SW846 8290
Aroclor 1254	1100	160	ug/kg	SW846 8082
L-0508190009 08/24/05 12:00 027				
Percent Lipids	0.70 B		%	SW846 8290
L-0508190011 08/24/05 12:00 028				
Percent Lipids	0.50 B		%	SW846 8290
L-0508190012 08/24/05 12:00 029				
Percent Lipids	3.7 B		%	SW846 8290
Aroclor 1254	110	33	ug/kg	SW846 8082
L-0508150001 08/16/05 12:00 030				
Percent Lipids	1.7 B		%	SW846 8290
Aroclor 1254	57	33	ug/kg	SW846 8082

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EXECUTIVE SUMMARY - Detection Highlights

A5J250202

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
L-0508150002 08/16/05 12:00 031				
Percent Lipids	1.1 B		%	SW846 8290
Aroclor 1254	54	33	ug/kg	SW846 8082
L-0508150003 08/16/05 12:00 032				
Percent Lipids	0.50 B		%	SW846 8290
L-0508150004 08/16/05 12:00 033				
Percent Lipids	9.4 B		%	SW846 8290
Aroclor 1254	760	160	ug/kg	SW846 8082
L-0508150017 08/16/05 12:00 034				
Percent Lipids	3.1 B		%	SW846 8290
Aroclor 1254	500	66	ug/kg	SW846 8082
L-0508190002 08/18/05 12:00 036				
Percent Lipids	0.90 B		%	SW846 8290
Aroclor 1254	51	33	ug/kg	SW846 8082
R-0508190002 08/24/05 12:00 037				
Percent Lipids	0.40 B		%	SW846 8290
R-0508190003 08/24/05 12:00 038				
Percent Lipids	0.50 B		%	SW846 8290
R-0508190004 08/24/05 12:00 039				
Percent Lipids	0.40		%	SW846 8290
R-0510100002 10/10/05 12:00 040				
Percent Lipids	1.3		%	SW846 8290
Aroclor 1254	36	33	ug/kg	SW846 8082

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EXECUTIVE SUMMARY - Detection Highlights

A5J250202

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
R-0508300006 08/25/05 12:00 041				
Percent Lipids	14		%	SW846 8290
Aroclor 1254	1700	330	ug/kg	SW846 8082
R-0508300007 08/25/05 12:00 042				
Percent Lipids	5.3		%	SW846 8290
Aroclor 1254	2200	330	ug/kg	SW846 8082
R-0508300008 08/25/05 12:00 043				
Percent Lipids	8.7		%	SW846 8290
Aroclor 1254	2900	330	ug/kg	SW846 8082
R-0508300009 08/25/05 12:00 044				
Percent Lipids	6.3 B		%	SW846 8290
Aroclor 1254	260	66	ug/kg	SW846 8082
R-0508300010 08/25/05 12:00 045				
Percent Lipids	9.0		%	SW846 8290
Aroclor 1254	2200	330	ug/kg	SW846 8082
R-0510210001 10/04/05 12:00 046				
Percent Lipids	2.7		%	SW846 8290
Aroclor 1254	130	33	ug/kg	SW846 8082
R-0510210002 08/18/05 12:00 047				
Percent Lipids	18		%	SW846 8290
Aroclor 1254	2800	160	ug/kg	SW846 8082
R-0510210003 08/16/05 12:00 048				
Percent Lipids	5.0		%	SW846 8290
Aroclor 1254	790	66	ug/kg	SW846 8082
R-0510210004 08/25/05 12:00 049				
Percent Lipids	5.7		%	SW846 8290
Aroclor 1254	1400	160	ug/kg	SW846 8082

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EXECUTIVE SUMMARY - Detection Highlights

A5J250202

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
R-0510210005 08/18/05 12:00 050				
Percent Lipids	7.0		%	SW846 8290
Aroclor 1254	560	66	ug/kg	SW846 8082
R-0510210006 10/10/05 12:00 051				
Percent Lipids	0.30		%	SW846 8290
R-0510140001 10/04/05 12:00 052				
Percent Lipids	2.2		%	SW846 8290
Aroclor 1254	71	33	ug/kg	SW846 8082
R-0508290002 09/08/05 12:00 055				
Percent Lipids	2.0		%	SW846 8290
Aroclor 1254	1200	160	ug/kg	SW846 8082
R-0508290003 09/08/05 12:00 056				
Percent Lipids	0.70		%	SW846 8290
Aroclor 1254	150	33	ug/kg	SW846 8082
R-0510100001 10/10/05 12:00 057				
Percent Lipids	0.30		%	SW846 8290

ANALYTICAL METHODS SUMMARY

A5J250202

PARAMETER	ANALYTICAL METHOD
Organochlorine Pesticides	SW846 8081A
Percent Lipids	SW846 8290
PCBs by SW-846 8082	SW846 8082

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A5J250202

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
HNJEL	001	R-0508230014	09/28/05	12:00
HNJFE	002	R-0508230015	09/28/05	12:00
HNJFF	003	R-0508230016	09/28/05	12:00
HNJFG	004	R-0508230017	09/28/05	12:00
HNJFH	005	R-0508310002	09/21/05	12:00
HNJFK	006	R-0508310004	09/21/05	12:00
HNJFL	007	R-0509140011	09/22/05	12:00
HNJFM	008	R-0509140012	09/22/05	12:00
HNJFP	009	R-0509140013	09/22/05	12:00
HNJFQ	010	R-0509160001	10/06/05	12:00
HNJFT	011	R-0509160002	10/06/05	12:00
HNJFV	012	R-0509160003	10/06/05	12:00
HNJFW	013	R-0509160004	10/14/05	12:00
HNJFX	014	R-0509160029	10/13/05	12:00
HNJF0	015	R-0509160030	10/13/05	12:00
HNJF3	016	R-0509160032	10/13/05	12:00
HNJF4	017	R-0508290004	09/08/05	12:00
HNJF7	018	R-0509300001	10/04/05	12:00
HNJF9	019	R-0509300003	10/04/05	12:00
HNJGD	020	L-0508160017	08/18/05	12:00
HNJGF	021	L-0508160018	08/18/05	12:00
HNJGL	022	L-0508160019	08/18/05	12:00
HNJGP	023	L-0508160020	08/18/05	12:00
HNJGR	024	L-0508160002	08/18/05	12:00
HNJGV	025	L-0508160001	08/18/05	12:00
HNJGX	026	L-0508160004	08/18/05	12:00
HNJG1	027	L-0508190009	08/24/05	12:00
HNJG2	028	L-0508190011	08/24/05	12:00
HNJG4	029	L-0508190012	08/24/05	12:00
HNJG6	030	L-0508150001	08/16/05	12:00
HNJG7	031	L-0508150002	08/16/05	12:00
HNJG8	032	L-0508150003	08/16/05	12:00
HNJG9	033	L-0508150004	08/16/05	12:00
HNJHA	034	L-0508150017	08/16/05	12:00
HNJHC	035	L-0508190001	08/18/05	12:00
HNJHD	036	L-0508190002	08/18/05	12:00

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SAMPLE SUMMARY

A5J250202

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
HNJHE	037	R-0508190002	08/24/05	12:00
HNJHH	038	R-0508190003	08/24/05	12:00
HNJHJ	039	R-0508190004	08/24/05	12:00
HNJHK	040	R-0510100002	10/10/05	12:00
HNJHL	041	R-0508300006	08/25/05	12:00
HNJHN	042	R-0508300007	08/25/05	12:00
HNJHP	043	R-0508300008	08/25/05	12:00
HNJHQ	044	R-0508300009	08/25/05	12:00
HNJHT	045	R-0508300010	08/25/05	12:00
HNJH2	046	R-0510210001	10/04/05	12:00
HNJH5	047	R-0510210002	08/18/05	12:00
HNJH6	048	R-0510210003	08/16/05	12:00
HNJH7	049	R-0510210004	08/25/05	12:00
HNJH9	050	R-0510210005	08/18/05	12:00
HNJJC	051	R-0510210006	10/10/05	12:00
HNJJE	052	R-0510140001	10/04/05	12:00
HNN0D	055	R-0508290002	09/08/05	12:00
HNN0E	056	R-0508290003	09/08/05	12:00
HNN0F	057	R-0510100001	10/10/05	12:00

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508230014

GC Semivolatiles

Lot-Sample #...: A5J250202-001 **Work Order #...:** HNJEL1AA **Matrix.....:** TA
Date Sampled...: 09/28/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/14/05
Prep Batch #...: 5305046
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	210	ug/kg
alpha-BHC	ND	210	ug/kg
beta-BHC	ND	210	ug/kg
delta-BHC	ND	210	ug/kg
gamma-BHC (Lindane)	ND	210	ug/kg
Chlordane (technical)	ND	2100	ug/kg
4,4'-DDD	ND	210	ug/kg
4,4'-DDE	ND	210	ug/kg
4,4'-DDT	ND	210	ug/kg
Dieldrin	ND	210	ug/kg
Endrin	ND	210	ug/kg
Endrin aldehyde	ND	210	ug/kg
Endosulfan I	ND	210	ug/kg
Endosulfan II	ND	210	ug/kg
Endosulfan sulfate	ND	210	ug/kg
Heptachlor	ND	210	ug/kg
Heptachlor epoxide	ND	210	ug/kg
Methoxychlor	ND	400	ug/kg
Toxaphene	ND	8200	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	97 DIL	(31 - 131)
Decachlorobiphenyl	193 DIL,*	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508230014

GC Semivolatiles

Lot-Sample #...: A5J250202-001 **Work Order #...:** HNJEL1AC **Matrix.....:** TA
Date Sampled...: 09/28/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/08/05
Prep Batch #...: 5305045
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	55	(10 - 172)
Decachlorobiphenyl	32 *	(40 - 138)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508230014

GC Semivolatiles

Lot-Sample #...: A5J250202-001 **Work Order #...:** HNJEL1AD **Matrix.....:** TA
Date Sampled...: 09/28/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305044
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**0.40**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508230015

GC Semivolatiles

Lot-Sample #...: A5J250202-002 **Work Order #...:** HNJFE1AA **Matrix.....:** TA
Date Sampled...: 09/28/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/14/05
Prep Batch #...: 5305046
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	230	ug/kg
alpha-BHC	ND	230	ug/kg
beta-BHC	ND	230	ug/kg
delta-BHC	ND	230	ug/kg
gamma-BHC (Lindane)	ND	230	ug/kg
Chlordane (technical)	ND	2300	ug/kg
4,4'-DDD	ND	230	ug/kg
4,4'-DDE	ND	230	ug/kg
4,4'-DDT	ND	230	ug/kg
Dieldrin	ND	230	ug/kg
Endrin	ND	230	ug/kg
Endrin aldehyde	ND	230	ug/kg
Endosulfan I	ND	230	ug/kg
Endosulfan II	ND	230	ug/kg
Endosulfan sulfate	ND	230	ug/kg
Heptachlor	ND	230	ug/kg
Heptachlor epoxide	ND	230	ug/kg
Methoxychlor	ND	440	ug/kg
Toxaphene	ND	8900	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	113 DIL	(31 - 131)
Decachlorobiphenyl	135 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508230015

GC Semivolatiles

Lot-Sample #...: A5J250202-002 **Work Order #...:** HNJFE1AC **Matrix.....:** TA
Date Sampled...: 09/28/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/08/05
Prep Batch #...: 5305045
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	58	(10 - 172)
Decachlorobiphenyl	32 *	(40 - 138)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508230015

GC Semivolatiles

Lot-Sample #...: A5J250202-002 **Work Order #...:** HNJFE1AD **Matrix.....:** TA
Date Sampled...: 09/28/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305044
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**0.40**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508230016

GC Semivolatiles

Lot-Sample #...: A5J250202-003 **Work Order #...:** HNJFF1AA **Matrix.....:** TA
Date Sampled...: 09/28/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/14/05
Prep Batch #...: 5305046
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	200	ug/kg
alpha-BHC	ND	200	ug/kg
beta-BHC	ND	200	ug/kg
delta-BHC	ND	200	ug/kg
gamma-BHC (Lindane)	ND	200	ug/kg
Chlordane (technical)	ND	2000	ug/kg
4,4'-DDD	ND	200	ug/kg
4,4'-DDE	ND	200	ug/kg
4,4'-DDT	ND	200	ug/kg
Dieldrin	ND	200	ug/kg
Endrin	ND	200	ug/kg
Endrin aldehyde	ND	200	ug/kg
Endosulfan I	ND	200	ug/kg
Endosulfan II	ND	200	ug/kg
Endosulfan sulfate	ND	200	ug/kg
Heptachlor	ND	200	ug/kg
Heptachlor epoxide	ND	200	ug/kg
Methoxychlor	ND	390	ug/kg
Toxaphene	ND	7900	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	101 DIL	(31 - 131)
Decachlorobiphenyl	104 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508230016

GC Semivolatiles

Lot-Sample #...: A5J250202-003 **Work Order #...:** HNJFF1AC **Matrix.....:** TA
Date Sampled...: 09/28/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/08/05
Prep Batch #...: 5305045
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	65	(10 - 172)
Decachlorobiphenyl	39 *	(40 - 138)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508230016

GC Semivolatiles

Lot-Sample #...: A5J250202-003 **Work Order #...:** HNJFF1AD **Matrix.....:** TA
Date Sampled...: 09/28/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305044
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**0.40**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508230017

GC Semivolatiles

Lot-Sample #...: A5J250202-004 **Work Order #...:** HNJFG1AA **Matrix.....:** TA
Date Sampled...: 09/28/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/14/05
Prep Batch #...: 5305046
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	220	ug/kg
alpha-BHC	ND	220	ug/kg
beta-BHC	ND	220	ug/kg
delta-BHC	ND	220	ug/kg
gamma-BHC (Lindane)	ND	220	ug/kg
Chlordane (technical)	ND	2200	ug/kg
4,4'-DDD	ND	220	ug/kg
4,4'-DDE	ND	220	ug/kg
4,4'-DDT	ND	220	ug/kg
Dieldrin	ND	220	ug/kg
Endrin	ND	220	ug/kg
Endrin aldehyde	ND	220	ug/kg
Endosulfan I	ND	220	ug/kg
Endosulfan II	ND	220	ug/kg
Endosulfan sulfate	ND	220	ug/kg
Heptachlor	ND	220	ug/kg
Heptachlor epoxide	ND	220	ug/kg
Methoxychlor	ND	420	ug/kg
Toxaphene	ND	8600	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	203 DIL,*	(31 - 131)
Decachlorobiphenyl	71 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508230017

GC Semivolatiles

Lot-Sample #...: A5J250202-004 **Work Order #...:** HNJFG1AC **Matrix.....:** TA
Date Sampled...: 09/28/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/08/05
Prep Batch #...: 5305045
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	70	(10 - 172)
Decachlorobiphenyl	40	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508230017

GC Semivolatiles

Lot-Sample #...: A5J250202-004 **Work Order #...:** HNJFG1AD **Matrix.....:** TA
Date Sampled...: 09/28/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305044
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**0.40**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508310002

GC Semivolatiles

Lot-Sample #...: A5J250202-005 **Work Order #...:** HNJFH1AA **Matrix.....:** TA
Date Sampled...: 09/21/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/14/05
Prep Batch #...: 5305046
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	200	ug/kg
alpha-BHC	ND	200	ug/kg
beta-BHC	ND	200	ug/kg
delta-BHC	ND	200	ug/kg
gamma-BHC (Lindane)	ND	200	ug/kg
Chlordane (technical)	ND	2000	ug/kg
4,4'-DDD	ND	200	ug/kg
4,4'-DDE	ND	200	ug/kg
4,4'-DDT	ND	200	ug/kg
Dieldrin	ND	200	ug/kg
Endrin	ND	200	ug/kg
Endrin aldehyde	ND	200	ug/kg
Endosulfan I	ND	200	ug/kg
Endosulfan II	ND	200	ug/kg
Endosulfan sulfate	ND	200	ug/kg
Heptachlor	ND	200	ug/kg
Heptachlor epoxide	ND	200	ug/kg
Methoxychlor	ND	390	ug/kg
Toxaphene	ND	7800	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	152 DIL,*	(31 - 131)
Decachlorobiphenyl	56 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508310002

GC Semivolatiles

Lot-Sample #...: A5J250202-005 **Work Order #...:** HNJFH1AC **Matrix.....:** TA
Date Sampled...: 09/21/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/08/05
Prep Batch #...: 5305045
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	**120**	**33**	**ug/kg**
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	55	(10 - 172)
Decachlorobiphenyl	43	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508310002

GC Semivolatiles

Lot-Sample #...: A5J250202-005 **Work Order #...:** HNJFH1AD **Matrix.....:** TA
Date Sampled...: 09/21/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305044
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**1.6**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508310004

GC Semivolatiles

Lot-Sample #...: A5J250202-006 **Work Order #...:** HNJFK1AA **Matrix.....:** TA
Date Sampled...: 09/21/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/14/05
Prep Batch #...: 5305046
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	210	ug/kg
alpha-BHC	ND	210	ug/kg
beta-BHC	ND	210	ug/kg
delta-BHC	ND	210	ug/kg
gamma-BHC (Lindane)	ND	210	ug/kg
Chlordane (technical)	ND	2100	ug/kg
4,4'-DDD	ND	210	ug/kg
4,4'-DDE	ND	210	ug/kg
4,4'-DDT	ND	210	ug/kg
Dieldrin	ND	210	ug/kg
Endrin	ND	210	ug/kg
Endrin aldehyde	ND	210	ug/kg
Endosulfan I	ND	210	ug/kg
Endosulfan II	ND	210	ug/kg
Endosulfan sulfate	ND	210	ug/kg
Heptachlor	ND	210	ug/kg
Heptachlor epoxide	ND	210	ug/kg
Methoxychlor	ND	420	ug/kg
Toxaphene	ND	8400	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	195 DIL,*	(31 - 131)
Decachlorobiphenyl	79 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508310004

GC Semivolatiles

Lot-Sample #...: A5J250202-006 **Work Order #...:** HNJFK1AC **Matrix.....:** TA
Date Sampled...: 09/21/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/08/05
Prep Batch #...: 5305045
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	46	(10 - 172)
Decachlorobiphenyl	26 *	(40 - 138)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508310004

GC Semivolatiles

Lot-Sample #...: A5J250202-006 **Work Order #...:** HNJFK1AD **Matrix.....:** TA
Date Sampled...: 09/21/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305044
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	ND		%

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509140011

GC Semivolatiles

Lot-Sample #...: A5J250202-007 **Work Order #...:** HNJFL1AA **Matrix.....:** TA
Date Sampled...: 09/22/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/14/05
Prep Batch #...: 5305046
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	220	ug/kg
alpha-BHC	ND	220	ug/kg
beta-BHC	ND	220	ug/kg
delta-BHC	ND	220	ug/kg
gamma-BHC (Lindane)	ND	220	ug/kg
Chlordane (technical)	ND	2200	ug/kg
4,4'-DDD	ND	220	ug/kg
4,4'-DDE	ND	220	ug/kg
4,4'-DDT	ND	220	ug/kg
Dieldrin	ND	220	ug/kg
Endrin	ND	220	ug/kg
Endrin aldehyde	ND	220	ug/kg
Endosulfan I	ND	220	ug/kg
Endosulfan II	ND	220	ug/kg
Endosulfan sulfate	ND	220	ug/kg
Heptachlor	ND	220	ug/kg
Heptachlor epoxide	ND	220	ug/kg
Methoxychlor	ND	430	ug/kg
Toxaphene	ND	8800	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	129 DIL	(31 - 131)
Decachlorobiphenyl	87 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509140011

GC Semivolatiles

Lot-Sample #...: A5J250202-007 **Work Order #...:** HNJFL1AC **Matrix.....:** TA
Date Sampled...: 09/22/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/08/05
Prep Batch #...: 5305045
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	**46**	**33**	**ug/kg**
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	77	(10 - 172)
Decachlorobiphenyl	46	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509140011

GC Semivolatiles

Lot-Sample #...: A5J250202-007 **Work Order #...:** HNJFL1AD **Matrix.....:** TA
Date Sampled...: 09/22/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305044
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**0.40**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509140012

GC Semivolatiles

Lot-Sample #...: A5J250202-008 **Work Order #...:** HNJFM1AA **Matrix.....:** TA
Date Sampled...: 09/22/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/14/05
Prep Batch #...: 5305046
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	210	ug/kg
alpha-BHC	ND	210	ug/kg
beta-BHC	ND	210	ug/kg
delta-BHC	ND	210	ug/kg
gamma-BHC (Lindane)	ND	210	ug/kg
Chlordane (technical)	ND	2100	ug/kg
4,4'-DDD	ND	210	ug/kg
4,4'-DDE	ND	210	ug/kg
4,4'-DDT	ND	210	ug/kg
Dieldrin	ND	210	ug/kg
Endrin	ND	210	ug/kg
Endrin aldehyde	ND	210	ug/kg
Endosulfan I	ND	210	ug/kg
Endosulfan II	ND	210	ug/kg
Endosulfan sulfate	ND	210	ug/kg
Heptachlor	ND	210	ug/kg
Heptachlor epoxide	ND	210	ug/kg
Methoxychlor	ND	410	ug/kg
Toxaphene	ND	8300	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	157 DIL,*	(31 - 131)
Decachlorobiphenyl	116 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509140012

GC Semivolatiles

Lot-Sample #...: A5J250202-008 **Work Order #...:** HNJFM1AC **Matrix.....:** TA
Date Sampled...: 09/22/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/08/05
Prep Batch #...: 5305045
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	**59**	**33**	**ug/kg**
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	**44**	**33**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	87	(10 - 172)
Decachlorobiphenyl	58	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509140012

GC Semivolatiles

Lot-Sample #...: A5J250202-008 **Work Order #...:** HNJFM1AD **Matrix.....:** TA
Date Sampled...: 09/22/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305044
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**0.80**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509140013

GC Semivolatiles

Lot-Sample #...: A5J250202-009 **Work Order #...:** HNJFP1AA **Matrix.....:** TA
Date Sampled...: 09/22/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/25/05
Prep Batch #...: 5305046
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	220	ug/kg
alpha-BHC	ND	220	ug/kg
beta-BHC	ND	220	ug/kg
delta-BHC	ND	220	ug/kg
gamma-BHC (Lindane)	ND	220	ug/kg
Chlordane (technical)	ND	2200	ug/kg
4,4'-DDD	ND	220	ug/kg
4,4'-DDE	ND	220	ug/kg
4,4'-DDT	ND	220	ug/kg
Dieldrin	ND	220	ug/kg
Endrin	ND	220	ug/kg
Endrin aldehyde	ND	220	ug/kg
Endosulfan I	ND	220	ug/kg
Endosulfan II	ND	220	ug/kg
Endosulfan sulfate	ND	220	ug/kg
Heptachlor	ND	220	ug/kg
Heptachlor epoxide	ND	220	ug/kg
Methoxychlor	ND	440	ug/kg
Toxaphene	ND	8800	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	0.0 DIL,*	(31 - 131)
Decachlorobiphenyl	438 DIL,*	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509140013

GC Semivolatiles

Lot-Sample #...: A5J250202-009 **Work Order #...:** HNJFP2AC **Matrix.....:** TA
Date Sampled...: 09/22/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/11/05 **Analysis Date..:** 11/14/05
Prep Batch #...: 5318201
Dilution Factor: 2
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	66	ug/kg
Aroclor 1221	ND	66	ug/kg
Aroclor 1232	ND	66	ug/kg
Aroclor 1242	ND	66	ug/kg
Aroclor 1248	ND	66	ug/kg
Aroclor 1254	**200**	**66**	**ug/kg**
Aroclor 1260	ND	66	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	127	(10 - 172)
Decachlorobiphenyl	122	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509140013

GC Semivolatiles

Lot-Sample #...: A5J250202-009 **Work Order #...:** HNJFP1AD **Matrix.....:** TA
Date Sampled...: 09/22/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305044
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	ND		%

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509160001

GC Semivolatiles

Lot-Sample #...: A5J250202-010 **Work Order #...:** HNJFQ1AA **Matrix.....:** TA
Date Sampled...: 10/06/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/14/05
Prep Batch #...: 5305046
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	181 DIL,*	(31 - 131)
Decachlorobiphenyl	198 DIL,*	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509160001

GC Semivolatiles

Lot-Sample #...: A5J250202-010 **Work Order #...:** HNJFQ1AC **Matrix.....:** TA
Date Sampled...: 10/06/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/08/05
Prep Batch #...: 5305045
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	**34**	**33**	**ug/kg**
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	82	(10 - 172)
Decachlorobiphenyl	49	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509160001

GC Semivolatiles

Lot-Sample #...: A5J250202-010 **Work Order #...:** HNJFQ1AD **Matrix.....:** TA
Date Sampled...: 10/06/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305044
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**0.30**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509160002

GC Semivolatiles

Lot-Sample #...: A5J250202-011 **Work Order #...:** HNJFT1AA **Matrix.....:** TA
Date Sampled...: 10/06/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/14/05
Prep Batch #...: 5305046
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	205 DIL,*	(31 - 131)
Decachlorobiphenyl	124 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509160002

GC Semivolatiles

Lot-Sample #...: A5J250202-011 **Work Order #...:** HNJFT1AC **Matrix.....:** TA
Date Sampled...: 10/06/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/08/05
Prep Batch #...: 5305045
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	**35**	**33**	**ug/kg**
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	69	(10 - 172)
Decachlorobiphenyl	46	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509160002

GC Semivolatiles

Lot-Sample #...: A5J250202-011 **Work Order #...:** HNJFT1AD **Matrix.....:** TA
Date Sampled...: 10/06/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305044
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**0.30**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509160003

GC Semivolatiles

Lot-Sample #...: A5J250202-012 **Work Order #...:** HNJFV1AA **Matrix.....:** TA
Date Sampled...: 10/06/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/25/05
Prep Batch #...: 5305046
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	0.0 DIL,*	(31 - 131)
Decachlorobiphenyl	303 DIL,*	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509160003

GC Semivolatiles

Lot-Sample #...: A5J250202-012 **Work Order #...:** HNJFV1AC **Matrix.....:** TA
Date Sampled...: 10/06/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/08/05
Prep Batch #...: 5305045
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	13	(10 - 172)
Decachlorobiphenyl	35 *	(40 - 138)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509160003

GC Semivolatiles

Lot-Sample #...: A5J250202-012 **Work Order #...:** HNJFV1AD **Matrix.....:** TA
Date Sampled...: 10/06/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305044
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**0.40**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509160004

GC Semivolatiles

Lot-Sample #...: A5J250202-013 **Work Order #...:** HNJFW1AA **Matrix.....:** TA
Date Sampled...: 10/14/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/14/05
Prep Batch #...: 5305046
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	210	ug/kg
alpha-BHC	ND	210	ug/kg
beta-BHC	ND	210	ug/kg
delta-BHC	ND	210	ug/kg
gamma-BHC (Lindane)	ND	210	ug/kg
Chlordane (technical)	ND	2100	ug/kg
4,4'-DDD	ND	210	ug/kg
4,4'-DDE	ND	210	ug/kg
4,4'-DDT	ND	210	ug/kg
Dieldrin	ND	210	ug/kg
Endrin	ND	210	ug/kg
Endrin aldehyde	ND	210	ug/kg
Endosulfan I	ND	210	ug/kg
Endosulfan II	ND	210	ug/kg
Endosulfan sulfate	ND	210	ug/kg
Heptachlor	ND	210	ug/kg
Heptachlor epoxide	ND	210	ug/kg
Methoxychlor	ND	400	ug/kg
Toxaphene	ND	8200	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	134 DIL,*	(31 - 131)
Decachlorobiphenyl	163 DIL,*	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509160004

GC Semivolatiles

Lot-Sample #...: A5J250202-013 **Work Order #...:** HNJFW1AC **Matrix.....:** TA
Date Sampled...: 10/14/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/08/05
Prep Batch #...: 5305045
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	**110**	**33**	**ug/kg**
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	**250**	**33**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	100	(10 - 172)
Decachlorobiphenyl	78	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509160004

GC Semivolatiles

Lot-Sample #...: A5J250202-013 **Work Order #...:** HNJFW1AD **Matrix.....:** TA
Date Sampled...: 10/14/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305044
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**2.0**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509160029

GC Semivolatiles

Lot-Sample #...: A5J250202-014 **Work Order #...:** HNJFX1AA **Matrix.....:** TA
Date Sampled...: 10/13/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/14/05
Prep Batch #...: 5305046
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	220	ug/kg
alpha-BHC	ND	220	ug/kg
beta-BHC	ND	220	ug/kg
delta-BHC	ND	220	ug/kg
gamma-BHC (Lindane)	ND	220	ug/kg
Chlordane (technical)	ND	2200	ug/kg
4,4'-DDD	ND	220	ug/kg
4,4'-DDE	ND	220	ug/kg
4,4'-DDT	ND	220	ug/kg
Dieldrin	ND	220	ug/kg
Endrin	ND	220	ug/kg
Endrin aldehyde	ND	220	ug/kg
Endosulfan I	ND	220	ug/kg
Endosulfan II	ND	220	ug/kg
Endosulfan sulfate	ND	220	ug/kg
Heptachlor	ND	220	ug/kg
Heptachlor epoxide	ND	220	ug/kg
Methoxychlor	ND	430	ug/kg
Toxaphene	ND	8700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	1210 DIL,*	(31 - 131)
Decachlorobiphenyl	193 DIL,*	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509160029

GC Semivolatiles

Lot-Sample #...: A5J250202-014 **Work Order #...:** HNJFX1AC **Matrix.....:** TA
Date Sampled...: 10/13/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/08/05
Prep Batch #...: 5305045
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	**73**	**33**	**ug/kg**
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	76	(10 - 172)
Decachlorobiphenyl	55	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509160029

GC Semivolatiles

Lot-Sample #...: A5J250202-014 **Work Order #...:** HNJFX1AD **Matrix.....:** TA
Date Sampled...: 10/13/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305044
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**1.3**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509160030

GC Semivolatiles

Lot-Sample #...: A5J250202-015 **Work Order #...:** HNJF01AA **Matrix.....:** TA
Date Sampled...: 10/13/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/14/05
Prep Batch #...: 5305046
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	220	ug/kg
alpha-BHC	ND	220	ug/kg
beta-BHC	ND	220	ug/kg
delta-BHC	ND	220	ug/kg
gamma-BHC (Lindane)	ND	220	ug/kg
Chlordane (technical)	ND	2200	ug/kg
4,4'-DDD	ND	220	ug/kg
4,4'-DDE	ND	220	ug/kg
4,4'-DDT	ND	220	ug/kg
Dieldrin	ND	220	ug/kg
Endrin	ND	220	ug/kg
Endrin aldehyde	ND	220	ug/kg
Endosulfan I	ND	220	ug/kg
Endosulfan II	ND	220	ug/kg
Endosulfan sulfate	ND	220	ug/kg
Heptachlor	ND	220	ug/kg
Heptachlor epoxide	ND	220	ug/kg
Methoxychlor	ND	420	ug/kg
Toxaphene	ND	8600	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	145 DIL,*	(31 - 131)
Decachlorobiphenyl	232 DIL,*	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509160030

GC Semivolatiles

Lot-Sample #...: A5J250202-015 **Work Order #...:** HNJF01AC **Matrix.....:** TA
Date Sampled...: 10/13/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/09/05
Prep Batch #...: 5305045
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	81	(10 - 172)
Decachlorobiphenyl	59	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509160030

GC Semivolatiles

Lot-Sample #...: A5J250202-015 **Work Order #...:** HNJF01AD **Matrix.....:** TA
Date Sampled...: 10/13/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305044
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**0.40**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509160032

GC Semivolatiles

Lot-Sample #...: A5J250202-016 **Work Order #...:** HNJF31AA **Matrix.....:** TA
Date Sampled...: 10/13/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/14/05
Prep Batch #...: 5305046
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	240	ug/kg
alpha-BHC	ND	240	ug/kg
beta-BHC	ND	240	ug/kg
delta-BHC	ND	240	ug/kg
gamma-BHC (Lindane)	ND	240	ug/kg
Chlordane (technical)	ND	2400	ug/kg
4,4'-DDD	ND	240	ug/kg
4,4'-DDE	ND	240	ug/kg
4,4'-DDT	ND	240	ug/kg
Dieldrin	ND	240	ug/kg
Endrin	ND	240	ug/kg
Endrin aldehyde	ND	240	ug/kg
Endosulfan I	ND	240	ug/kg
Endosulfan II	ND	240	ug/kg
Endosulfan sulfate	ND	240	ug/kg
Heptachlor	ND	240	ug/kg
Heptachlor epoxide	ND	240	ug/kg
Methoxychlor	ND	460	ug/kg
Toxaphene	ND	9400	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	194 DIL,*	(31 - 131)
Decachlorobiphenyl	140 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509160032

GC Semivolatiles

Lot-Sample #...: A5J250202-016 **Work Order #...:** HNJF31AC **Matrix.....:** TA
Date Sampled...: 10/13/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/09/05
Prep Batch #...: 5305045
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	70	(10 - 172)
Decachlorobiphenyl	44	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509160032

GC Semivolatiles

Lot-Sample #...: A5J250202-016 **Work Order #...:** HNJF31AD **Matrix.....:** TA
Date Sampled...: 10/13/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305044
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**0.50**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508290004

GC Semivolatiles

Lot-Sample #...: A5J250202-017 **Work Order #...:** HNJF41AA **Matrix.....:** TA
Date Sampled...: 09/08/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/14/05
Prep Batch #...: 5305046
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	210	ug/kg
alpha-BHC	ND	210	ug/kg
beta-BHC	ND	210	ug/kg
delta-BHC	ND	210	ug/kg
gamma-BHC (Lindane)	ND	210	ug/kg
Chlordane (technical)	ND	2100	ug/kg
4,4'-DDD	ND	210	ug/kg
4,4'-DDE	ND	210	ug/kg
4,4'-DDT	ND	210	ug/kg
Dieldrin	ND	210	ug/kg
Endrin	ND	210	ug/kg
Endrin aldehyde	ND	210	ug/kg
Endosulfan I	ND	210	ug/kg
Endosulfan II	ND	210	ug/kg
Endosulfan sulfate	ND	210	ug/kg
Heptachlor	ND	210	ug/kg
Heptachlor epoxide	ND	210	ug/kg
Methoxychlor	ND	410	ug/kg
Toxaphene	ND	8400	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	107 DIL	(31 - 131)
Decachlorobiphenyl	97 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508290004

GC Semivolatiles

Lot-Sample #...: A5J250202-017 **Work Order #...:** HNJF41AC **Matrix.....:** TA
Date Sampled...: 09/08/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/09/05
Prep Batch #...: 5305045
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	89	(10 - 172)
Decachlorobiphenyl	61	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508290004

GC Semivolatiles

Lot-Sample #...: A5J250202-017 **Work Order #...:** HNJF41AD **Matrix.....:** TA
Date Sampled...: 09/08/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305044
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	ND		%

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509300001

GC Semivolatiles

Lot-Sample #...: A5J250202-018 **Work Order #...:** HNJF71AA **Matrix.....:** TA
Date Sampled...: 10/04/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/14/05
Prep Batch #...: 5305046
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	200	ug/kg
alpha-BHC	ND	200	ug/kg
beta-BHC	ND	200	ug/kg
delta-BHC	ND	200	ug/kg
gamma-BHC (Lindane)	ND	200	ug/kg
Chlordane (technical)	ND	2000	ug/kg
4,4'-DDD	ND	200	ug/kg
4,4'-DDE	ND	200	ug/kg
4,4'-DDT	ND	200	ug/kg
Dieldrin	ND	200	ug/kg
Endrin	ND	200	ug/kg
Endrin aldehyde	ND	200	ug/kg
Endosulfan I	ND	200	ug/kg
Endosulfan II	ND	200	ug/kg
Endosulfan sulfate	ND	200	ug/kg
Heptachlor	ND	200	ug/kg
Heptachlor epoxide	ND	200	ug/kg
Methoxychlor	ND	400	ug/kg
Toxaphene	ND	8000	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	226 DIL,*	(31 - 131)
Decachlorobiphenyl	105 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509300001

GC Semivolatiles

Lot-Sample #...: A5J250202-018 **Work Order #...:** HNJF71AC **Matrix.....:** TA
Date Sampled...: 10/04/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/09/05
Prep Batch #...: 5305045
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	**76**	**33**	**ug/kg**
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	59	(10 - 172)
Decachlorobiphenyl	38 *	(40 - 138)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509300001

GC Semivolatiles

Lot-Sample #...: A5J250202-018 **Work Order #...:** HNJF71AD **Matrix.....:** TA
Date Sampled...: 10/04/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305044
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**1.6**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509300003

GC Semivolatiles

Lot-Sample #...: A5J250202-019 **Work Order #...:** HNJF91AA **Matrix.....:** TA
Date Sampled...: 10/04/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/14/05
Prep Batch #...: 5305046
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	107 DIL	(31 - 131)
Decachlorobiphenyl	82 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509300003

GC Semivolatiles

Lot-Sample #...: A5J250202-019 **Work Order #...:** HNJF91AC **Matrix.....:** TA
Date Sampled...: 10/04/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/09/05
Prep Batch #...: 5305045
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	39	(10 - 172)
Decachlorobiphenyl	28 *	(40 - 138)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0509300003

GC Semivolatiles

Lot-Sample #...: A5J250202-019 **Work Order #...:** HNJF91AD **Matrix.....:** TA
Date Sampled...: 10/04/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305044
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	ND		%

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508160017

GC Semivolatiles

Lot-Sample #...: A5J250202-020 **Work Order #...:** HNJGD1AA **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/14/05
Prep Batch #...: 5305046
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	230	ug/kg
alpha-BHC	ND	230	ug/kg
beta-BHC	ND	230	ug/kg
delta-BHC	ND	230	ug/kg
gamma-BHC (Lindane)	ND	230	ug/kg
Chlordane (technical)	ND	2300	ug/kg
4,4'-DDD	ND	230	ug/kg
4,4'-DDE	ND	230	ug/kg
4,4'-DDT	ND	230	ug/kg
Dieldrin	ND	230	ug/kg
Endrin	ND	230	ug/kg
Endrin aldehyde	ND	230	ug/kg
Endosulfan I	ND	230	ug/kg
Endosulfan II	ND	230	ug/kg
Endosulfan sulfate	ND	230	ug/kg
Heptachlor	ND	230	ug/kg
Heptachlor epoxide	ND	230	ug/kg
Methoxychlor	ND	440	ug/kg
Toxaphene	ND	9000	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	182 DIL,*	(31 - 131)
Decachlorobiphenyl	111 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508160017

GC Semivolatiles

Lot-Sample #...: A5J250202-020 **Work Order #...:** HNJGD1AC **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/09/05
Prep Batch #...: 5305045
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	**79**	**33**	**ug/kg**
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	84	(10 - 172)
Decachlorobiphenyl	65	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508160017

GC Semivolatiles

Lot-Sample #...: A5J250202-020 **Work Order #...:** HNJGD1AD **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305044
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**0.40**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508160018

GC Semivolatiles

Lot-Sample #...: A5J250202-021 **Work Order #...:** HNJGF1AA **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/14/05
Prep Batch #...: 5305064
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	212 DIL,*	(31 - 131)
Decachlorobiphenyl	183 DIL,*	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508160018

GC Semivolatiles

Lot-Sample #...: A5J250202-021 **Work Order #...:** HNJGF1AC **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/10/05
Prep Batch #...: 5305063
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	**41**	**33**	**ug/kg**
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	95	(10 - 172)
Decachlorobiphenyl	74	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508160018

GC Semivolatiles

Lot-Sample #...: A5J250202-021 **Work Order #...:** HNJGF1AD **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305062
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**0.40 B**		**%**

NOTE(S):

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508160019

GC Semivolatiles

Lot-Sample #...: A5J250202-022 **Work Order #...:** HNJGL1AA **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/14/05
Prep Batch #...: 5305064
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	220	ug/kg
alpha-BHC	ND	220	ug/kg
beta-BHC	ND	220	ug/kg
delta-BHC	ND	220	ug/kg
gamma-BHC (Lindane)	ND	220	ug/kg
Chlordane (technical)	ND	2200	ug/kg
4,4'-DDD	ND	220	ug/kg
4,4'-DDE	ND	220	ug/kg
4,4'-DDT	ND	220	ug/kg
Dieldrin	ND	220	ug/kg
Endrin	ND	220	ug/kg
Endrin aldehyde	ND	220	ug/kg
Endosulfan I	ND	220	ug/kg
Endosulfan II	ND	220	ug/kg
Endosulfan sulfate	ND	220	ug/kg
Heptachlor	ND	220	ug/kg
Heptachlor epoxide	ND	220	ug/kg
Methoxychlor	ND	430	ug/kg
Toxaphene	ND	8700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	652 DIL,*	(31 - 131)
Decachlorobiphenyl	221 DIL,*	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508160019

GC Semivolatiles

Lot-Sample #...: A5J250202-022 **Work Order #...:** HNJGL1AC **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/10/05
Prep Batch #...: 5305063
Dilution Factor: 2
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	66	ug/kg
Aroclor 1221	ND	66	ug/kg
Aroclor 1232	ND	66	ug/kg
Aroclor 1242	ND	66	ug/kg
Aroclor 1248	ND	66	ug/kg
Aroclor 1254	**340**	**66**	**ug/kg**
Aroclor 1260	ND	66	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	133	(10 - 172)
Decachlorobiphenyl	149 *	(40 - 138)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508160019

GC Semivolatiles

Lot-Sample #...: A5J250202-022 **Work Order #...:** HNJGL1AD **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305062
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**6.1 B**		**%**

NOTE(S):

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508160020

GC Semivolatiles

Lot-Sample #...: A5J250202-023 **Work Order #...:** HNJGP1AA **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/14/05
Prep Batch #...: 5305064
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	189 DIL,*	(31 - 131)
Decachlorobiphenyl	206 DIL,*	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508160020

GC Semivolatiles

Lot-Sample #...: A5J250202-023 **Work Order #...:** HNJGP1AC **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/10/05
Prep Batch #...: 5305063
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	**76**	**33**	**ug/kg**
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	107	(10 - 172)
Decachlorobiphenyl	82	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508160020

GC Semivolatiles

Lot-Sample #...: A5J250202-023 **Work Order #...:** HNJGP1AD **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305062
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**1.1 B**		**%**

NOTE(S):

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508160002

GC Semivolatiles

Lot-Sample #...: A5J250202-024 **Work Order #...:** HNJGR1AA **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5305064
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	220	ug/kg
alpha-BHC	ND	220	ug/kg
beta-BHC	ND	220	ug/kg
delta-BHC	ND	220	ug/kg
gamma-BHC (Lindane)	ND	220	ug/kg
Chlordane (technical)	ND	2200	ug/kg
4,4'-DDD	ND	220	ug/kg
4,4'-DDE	ND	220	ug/kg
4,4'-DDT	ND	220	ug/kg
Dieldrin	ND	220	ug/kg
Endrin	ND	220	ug/kg
Endrin aldehyde	ND	220	ug/kg
Endosulfan I	ND	220	ug/kg
Endosulfan II	ND	220	ug/kg
Endosulfan sulfate	ND	220	ug/kg
Heptachlor	ND	220	ug/kg
Heptachlor epoxide	ND	220	ug/kg
Methoxychlor	ND	420	ug/kg
Toxaphene	ND	8600	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	311 DIL,*	(31 - 131)
Decachlorobiphenyl	206 DIL,*	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508160002

GC Semivolatiles

Lot-Sample #...: A5J250202-024 **Work Order #...:** HNJGR1AC **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/10/05
Prep Batch #...: 5305063
Dilution Factor: 5
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	160	ug/kg
Aroclor 1221	ND	160	ug/kg
Aroclor 1232	ND	160	ug/kg
Aroclor 1242	ND	160	ug/kg
Aroclor 1248	ND	160	ug/kg
Aroclor 1254	**1300**	**160**	**ug/kg**
Aroclor 1260	ND	160	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	131 DIL	(10 - 172)
Decachlorobiphenyl	212 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508160002

GC Semivolatiles

Lot-Sample #...: A5J250202-024 **Work Order #...:** HNJGR1AD **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305062
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**17 B**		**%**

NOTE(S):

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508160001

GC Semivolatiles

Lot-Sample #...: A5J250202-025 **Work Order #...:** HNJGV1AA **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5305064
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	276 DIL,*	(31 - 131)
Decachlorobiphenyl	185 DIL,*	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508160001

GC Semivolatiles

Lot-Sample #...: A5J250202-025 **Work Order #...:** HNJGV1AC **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/10/05
Prep Batch #...: 5305063
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	**210**	**33**	**ug/kg**
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	120	(10 - 172)
Decachlorobiphenyl	118	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508160001

GC Semivolatiles

Lot-Sample #...: A5J250202-025 **Work Order #...:** HNJGV1AD **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305062
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**3.1 B**		**%**

NOTE(S):

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508160004

GC Semivolatiles

Lot-Sample #...: A5J250202-026 **Work Order #...:** HNJGX1AA **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5305064
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	794 DIL,*	(31 - 131)
Decachlorobiphenyl	188 DIL,*	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508160004

GC Semivolatiles

Lot-Sample #...: A5J250202-026 **Work Order #...:** HNJGX1AC **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/10/05
Prep Batch #...: 5305063
Dilution Factor: 5
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	160	ug/kg
Aroclor 1221	ND	160	ug/kg
Aroclor 1232	ND	160	ug/kg
Aroclor 1242	ND	160	ug/kg
Aroclor 1248	ND	160	ug/kg
Aroclor 1254	**1100**	**160**	**ug/kg**
Aroclor 1260	ND	160	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	205 DIL,*	(10 - 172)
Decachlorobiphenyl	272 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508160004

GC Semivolatiles

Lot-Sample #...: A5J250202-026 **Work Order #...:** HNJGX1AD **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305062
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**8.2 B**		**%**

NOTE(S):

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508190009

GC Semivolatiles

Lot-Sample #...: A5J250202-027 **Work Order #...:** HNJG11AA **Matrix.....:** TA
Date Sampled...: 08/24/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5305064
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	294 DIL,*	(31 - 131)
Decachlorobiphenyl	148 DIL,*	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508190009

GC Semivolatiles

Lot-Sample #...: A5J250202-027 **Work Order #...:** HNJG11AC **Matrix.....:** TA
Date Sampled...: 08/24/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/10/05
Prep Batch #...: 5305063
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	101	(10 - 172)
Decachlorobiphenyl	79	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508190009

GC Semivolatiles

Lot-Sample #...: A5J250202-027 **Work Order #...:** HNJG11AD **Matrix.....:** TA
Date Sampled...: 08/24/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305062
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**0.70 B**		**%**

NOTE(S):

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508190011

GC Semivolatiles

Lot-Sample #...: A5J250202-028 **Work Order #...:** HNJG21AA **Matrix.....:** TA
Date Sampled...: 08/24/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5305064
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	230	ug/kg
alpha-BHC	ND	230	ug/kg
beta-BHC	ND	230	ug/kg
delta-BHC	ND	230	ug/kg
gamma-BHC (Lindane)	ND	230	ug/kg
Chlordane (technical)	ND	2300	ug/kg
4,4'-DDD	ND	230	ug/kg
4,4'-DDE	ND	230	ug/kg
4,4'-DDT	ND	230	ug/kg
Dieldrin	ND	230	ug/kg
Endrin	ND	230	ug/kg
Endrin aldehyde	ND	230	ug/kg
Endosulfan I	ND	230	ug/kg
Endosulfan II	ND	230	ug/kg
Endosulfan sulfate	ND	230	ug/kg
Heptachlor	ND	230	ug/kg
Heptachlor epoxide	ND	230	ug/kg
Methoxychlor	ND	450	ug/kg
Toxaphene	ND	9200	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	140 DIL,*	(31 - 131)
Decachlorobiphenyl	111 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508190011

GC Semivolatiles

Lot-Sample #...: A5J250202-028 **Work Order #...:** HNJG21AC **Matrix.....:** TA
Date Sampled...: 08/24/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/10/05
Prep Batch #...: 5305063
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	84	(10 - 172)
Decachlorobiphenyl	60	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508190011

GC Semivolatiles

Lot-Sample #...: A5J250202-028 **Work Order #...:** HNJG21AD **Matrix.....:** TA
Date Sampled...: 08/24/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305062
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**0.50 B**		**%**

NOTE(S):

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508190012

GC Semivolatiles

Lot-Sample #...: A5J250202-029 **Work Order #...:** HNJG41AA **Matrix.....:** TA
Date Sampled...: 08/24/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5305064
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	400 DIL,*	(31 - 131)
Decachlorobiphenyl	192 DIL,*	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508190012

GC Semivolatiles

Lot-Sample #...: A5J250202-029 **Work Order #...:** HNJG41AC **Matrix.....:** TA
Date Sampled...: 08/24/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/10/05
Prep Batch #...: 5305063
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	**110**	**33**	**ug/kg**
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	103	(10 - 172)
Decachlorobiphenyl	104	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508190012

GC Semivolatiles

Lot-Sample #...: A5J250202-029 **Work Order #...:** HNJG41AD **Matrix.....:** TA
Date Sampled...: 08/24/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305062
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**3.7 B**		**%**

NOTE(S):

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508150001

GC Semivolatiles

Lot-Sample #...: A5J250202-030 **Work Order #...:** HNJG61AA **Matrix.....:** TA
Date Sampled...: 08/16/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5305064
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	210	ug/kg
alpha-BHC	ND	210	ug/kg
beta-BHC	ND	210	ug/kg
delta-BHC	ND	210	ug/kg
gamma-BHC (Lindane)	ND	210	ug/kg
Chlordane (technical)	ND	2100	ug/kg
4,4'-DDD	ND	210	ug/kg
4,4'-DDE	ND	210	ug/kg
4,4'-DDT	ND	210	ug/kg
Dieldrin	ND	210	ug/kg
Endrin	ND	210	ug/kg
Endrin aldehyde	ND	210	ug/kg
Endosulfan I	ND	210	ug/kg
Endosulfan II	ND	210	ug/kg
Endosulfan sulfate	ND	210	ug/kg
Heptachlor	ND	210	ug/kg
Heptachlor epoxide	ND	210	ug/kg
Methoxychlor	ND	410	ug/kg
Toxaphene	ND	8300	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	360 DIL,*	(31 - 131)
Decachlorobiphenyl	172 DIL,*	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508150001

GC Semivolatiles

Lot-Sample #...: A5J250202-030 **Work Order #...:** HNJG61AC **Matrix.....:** TA
Date Sampled...: 08/16/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/10/05
Prep Batch #...: 5305063
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	**57**	**33**	**ug/kg**
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	120	(10 - 172)
Decachlorobiphenyl	99	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508150001

GC Semivolatiles

Lot-Sample #...: A5J250202-030 **Work Order #...:** HNJG61AD **Matrix.....:** TA
Date Sampled...: 08/16/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305062
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**1.7 B**		**%**

NOTE(S):

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508150002

GC Semivolatiles

Lot-Sample #...: A5J250202-031 **Work Order #...:** HNJG71AA **Matrix.....:** TA
Date Sampled...: 08/16/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5305064
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	226 DIL,*	(31 - 131)
Decachlorobiphenyl	175 DIL,*	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508150002

GC Semivolatiles

Lot-Sample #...: A5J250202-031 **Work Order #...:** HNJG71AC **Matrix.....:** TA
Date Sampled...: 08/16/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/10/05
Prep Batch #...: 5305063
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	**54**	**33**	**ug/kg**
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	167	(10 - 172)
Decachlorobiphenyl	121	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508150002

GC Semivolatiles

Lot-Sample #...: A5J250202-031 **Work Order #...:** HNJG71AD **Matrix.....:** TA
Date Sampled...: 08/16/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305062
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**1.1 B**		**%**

NOTE(S):

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508150003

GC Semivolatiles

Lot-Sample #...: A5J250202-032 **Work Order #...:** HNJG81AA **Matrix.....:** TA
Date Sampled...: 08/16/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5305064
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	250	ug/kg
alpha-BHC	ND	250	ug/kg
beta-BHC	ND	250	ug/kg
delta-BHC	ND	250	ug/kg
gamma-BHC (Lindane)	ND	250	ug/kg
Chlordane (technical)	ND	2500	ug/kg
4,4'-DDD	ND	250	ug/kg
4,4'-DDE	ND	250	ug/kg
4,4'-DDT	ND	250	ug/kg
Dieldrin	ND	250	ug/kg
Endrin	ND	250	ug/kg
Endrin aldehyde	ND	250	ug/kg
Endosulfan I	ND	250	ug/kg
Endosulfan II	ND	250	ug/kg
Endosulfan sulfate	ND	250	ug/kg
Heptachlor	ND	250	ug/kg
Heptachlor epoxide	ND	250	ug/kg
Methoxychlor	ND	480	ug/kg
Toxaphene	ND	9700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	149 DIL,*	(31 - 131)
Decachlorobiphenyl	97 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508150003

GC Semivolatiles

Lot-Sample #...: A5J250202-032 **Work Order #...:** HNJG81AC **Matrix.....:** TA
Date Sampled...: 08/16/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/10/05
Prep Batch #...: 5305063
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	86	(10 - 172)
Decachlorobiphenyl	64	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508150003

GC Semivolatiles

Lot-Sample #...: A5J250202-032 **Work Order #...:** HNJG81AD **Matrix.....:** TA
Date Sampled...: 08/16/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305062
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**0.50 B**		**%**

NOTE(S):

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508150004

GC Semivolatiles

Lot-Sample #...: A5J250202-033 **Work Order #...:** HNJG91AA **Matrix.....:** TA
Date Sampled...: 08/16/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5305064
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	710 DIL,*	(31 - 131)
Decachlorobiphenyl	193 DIL,*	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508150004

GC Semivolatiles

Lot-Sample #...: A5J250202-033 **Work Order #...:** HNJG91AC **Matrix.....:** TA
Date Sampled...: 08/16/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/10/05
Prep Batch #...: 5305063
Dilution Factor: 5
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	160	ug/kg
Aroclor 1221	ND	160	ug/kg
Aroclor 1232	ND	160	ug/kg
Aroclor 1242	ND	160	ug/kg
Aroclor 1248	ND	160	ug/kg
Aroclor 1254	**760**	**160**	**ug/kg**
Aroclor 1260	ND	160	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	175 DIL,*	(10 - 172)
Decachlorobiphenyl	214 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508150004

GC Semivolatiles

Lot-Sample #...: A5J250202-033 **Work Order #...:** HNJG91AD **Matrix.....:** TA
Date Sampled...: 08/16/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305062
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**9.4 B**		**%**

NOTE(S):

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508150017

GC Semivolatiles

Lot-Sample #...: A5J250202-034 **Work Order #...:** HNJHA1AA **Matrix.....:** TA
Date Sampled...: 08/16/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5305064
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	304 DIL,*	(31 - 131)
Decachlorobiphenyl	143 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508150017

GC Semivolatiles

Lot-Sample #...: A5J250202-034 **Work Order #...:** HNJHA1AC **Matrix.....:** TA
Date Sampled...: 08/16/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/10/05
Prep Batch #...: 5305063
Dilution Factor: 2
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	66	ug/kg
Aroclor 1221	ND	66	ug/kg
Aroclor 1232	ND	66	ug/kg
Aroclor 1242	ND	66	ug/kg
Aroclor 1248	ND	66	ug/kg
Aroclor 1254	**500**	**66**	**ug/kg**
Aroclor 1260	ND	66	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	126	(10 - 172)
Decachlorobiphenyl	170 *	(40 - 138)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508150017

GC Semivolatiles

Lot-Sample #...: A5J250202-034 **Work Order #...:** HNJHA1AD **Matrix.....:** TA
Date Sampled...: 08/16/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305062
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**3.1 B**		**%**

NOTE(S):

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508190001

GC Semivolatiles

Lot-Sample #...: A5J250202-035 **Work Order #...:** HNJHC1AA **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5305064
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	190	ug/kg
alpha-BHC	ND	190	ug/kg
beta-BHC	ND	190	ug/kg
delta-BHC	ND	190	ug/kg
gamma-BHC (Lindane)	ND	190	ug/kg
Chlordane (technical)	ND	1900	ug/kg
4,4'-DDD	ND	190	ug/kg
4,4'-DDE	ND	190	ug/kg
4,4'-DDT	ND	190	ug/kg
Dieldrin	ND	190	ug/kg
Endrin	ND	190	ug/kg
Endrin aldehyde	ND	190	ug/kg
Endosulfan I	ND	190	ug/kg
Endosulfan II	ND	190	ug/kg
Endosulfan sulfate	ND	190	ug/kg
Heptachlor	ND	190	ug/kg
Heptachlor epoxide	ND	190	ug/kg
Methoxychlor	ND	370	ug/kg
Toxaphene	ND	7500	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	97 DIL	(31 - 131)
Decachlorobiphenyl	105 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508190001

GC Semivolatiles

Lot-Sample #...: A5J250202-035 **Work Order #...:** HNJHC1AC **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/10/05
Prep Batch #...: 5305063
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	86	(10 - 172)
Decachlorobiphenyl	58	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508190001

GC Semivolatiles

Lot-Sample #...: A5J250202-035 **Work Order #...:** HNJHC1AD **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305062
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	ND		%

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508190002

GC Semivolatiles

Lot-Sample #...: A5J250202-036 **Work Order #...:** HNJHD1AA **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5305064
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	230	ug/kg
alpha-BHC	ND	230	ug/kg
beta-BHC	ND	230	ug/kg
delta-BHC	ND	230	ug/kg
gamma-BHC (Lindane)	ND	230	ug/kg
Chlordane (technical)	ND	2300	ug/kg
4,4'-DDD	ND	230	ug/kg
4,4'-DDE	ND	230	ug/kg
4,4'-DDT	ND	230	ug/kg
Dieldrin	ND	230	ug/kg
Endrin	ND	230	ug/kg
Endrin aldehyde	ND	230	ug/kg
Endosulfan I	ND	230	ug/kg
Endosulfan II	ND	230	ug/kg
Endosulfan sulfate	ND	230	ug/kg
Heptachlor	ND	230	ug/kg
Heptachlor epoxide	ND	230	ug/kg
Methoxychlor	ND	440	ug/kg
Toxaphene	ND	8900	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	287 DIL,*	(31 - 131)
Decachlorobiphenyl	120 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508190002

GC Semivolatiles

Lot-Sample #...: A5J250202-036 **Work Order #...:** HNJHD1AC **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/10/05
Prep Batch #...: 5305063
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	**51**	**33**	**ug/kg**
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	113	(10 - 172)
Decachlorobiphenyl	98	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: L-0508190002

GC Semivolatiles

Lot-Sample #...: A5J250202-036 **Work Order #...:** HNJHD1AD **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305062
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**0.90 B**		**%**

NOTE(S):

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508190002

GC Semivolatiles

Lot-Sample #...: A5J250202-037 **Work Order #...:** HNJHE1AA **Matrix.....:** TA
Date Sampled...: 08/24/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5305064
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	200	ug/kg
alpha-BHC	ND	200	ug/kg
beta-BHC	ND	200	ug/kg
delta-BHC	ND	200	ug/kg
gamma-BHC (Lindane)	ND	200	ug/kg
Chlordane (technical)	ND	2000	ug/kg
4,4'-DDD	ND	200	ug/kg
4,4'-DDE	ND	200	ug/kg
4,4'-DDT	ND	200	ug/kg
Dieldrin	ND	200	ug/kg
Endrin	ND	200	ug/kg
Endrin aldehyde	ND	200	ug/kg
Endosulfan I	ND	200	ug/kg
Endosulfan II	ND	200	ug/kg
Endosulfan sulfate	ND	200	ug/kg
Heptachlor	ND	200	ug/kg
Heptachlor epoxide	ND	200	ug/kg
Methoxychlor	ND	400	ug/kg
Toxaphene	ND	8000	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	154 DIL,*	(31 - 131)
Decachlorobiphenyl	97 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508190002

GC Semivolatiles

Lot-Sample #...: A5J250202-037 **Work Order #...:** HNJHE1AC **Matrix.....:** TA
Date Sampled...: 08/24/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/10/05
Prep Batch #...: 5305063
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	107	(10 - 172)
Decachlorobiphenyl	83	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508190002

GC Semivolatiles

Lot-Sample #...: A5J250202-037 **Work Order #...:** HNJHE1AD **Matrix.....:** TA
Date Sampled...: 08/24/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305062
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**0.40 B**		**%**

NOTE(S):

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508190003

GC Semivolatiles

Lot-Sample #...: A5J250202-038 **Work Order #...:** HNJHH1AA **Matrix.....:** TA
Date Sampled...: 08/24/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5305064
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	230	ug/kg
alpha-BHC	ND	230	ug/kg
beta-BHC	ND	230	ug/kg
delta-BHC	ND	230	ug/kg
gamma-BHC (Lindane)	ND	230	ug/kg
Chlordane (technical)	ND	2300	ug/kg
4,4'-DDD	ND	230	ug/kg
4,4'-DDE	ND	230	ug/kg
4,4'-DDT	ND	230	ug/kg
Dieldrin	ND	230	ug/kg
Endrin	ND	230	ug/kg
Endrin aldehyde	ND	230	ug/kg
Endosulfan I	ND	230	ug/kg
Endosulfan II	ND	230	ug/kg
Endosulfan sulfate	ND	230	ug/kg
Heptachlor	ND	230	ug/kg
Heptachlor epoxide	ND	230	ug/kg
Methoxychlor	ND	450	ug/kg
Toxaphene	ND	9200	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	149 DIL,*	(31 - 131)
Decachlorobiphenyl	76 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508190003

GC Semivolatiles

Lot-Sample #...: A5J250202-038 **Work Order #...:** HNJHH1AC **Matrix.....:** TA
Date Sampled...: 08/24/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/10/05
Prep Batch #...: 5305063
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	63	(10 - 172)
Decachlorobiphenyl	40	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508190003

GC Semivolatiles

Lot-Sample #...: A5J250202-038 **Work Order #...:** HNJHH1AD **Matrix.....:** TA
Date Sampled...: 08/24/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/01/05 **Analysis Date..:** 11/02/05
Prep Batch #...: 5305062
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**0.50 B**		**%**

NOTE(S):

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508190004

GC Semivolatiles

Lot-Sample #...: A5J250202-039 **Work Order #...:** HNJHJ1AA **Matrix.....:** TA
Date Sampled...: 08/24/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5306032
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	166 DIL,*	(31 - 131)
Decachlorobiphenyl	110 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508190004

GC Semivolatiles

Lot-Sample #...: A5J250202-039 **Work Order #...:** HNJHJ1AC **Matrix.....:** TA
Date Sampled...: 08/24/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/11/05
Prep Batch #...: 5306033
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	122	(10 - 172)
Decachlorobiphenyl	81	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508190004

GC Semivolatiles

Lot-Sample #...: A5J250202-039 **Work Order #...:** HNJHJ1AD **Matrix.....:** TA
Date Sampled...: 08/24/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/03/05
Prep Batch #...: 5306035
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**0.40**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0510100002

GC Semivolatiles

Lot-Sample #...: A5J250202-040 **Work Order #...:** HNJHK1AA **Matrix.....:** TA
Date Sampled...: 10/10/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5306032
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	172 DIL,*	(31 - 131)
Decachlorobiphenyl	148 DIL,*	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0510100002

GC Semivolatiles

Lot-Sample #...: A5J250202-040 **Work Order #...:** HNJHK1AC **Matrix.....:** TA
Date Sampled...: 10/10/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/11/05
Prep Batch #...: 5306033
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	**36**	**33**	**ug/kg**
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	137	(10 - 172)
Decachlorobiphenyl	102	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: R-0510100002

GC Semivolatiles

Lot-Sample #...: A5J250202-040 **Work Order #...:** HNJHK1AD **Matrix.....:** TA
Date Sampled...: 10/10/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/03/05
Prep Batch #...: 5306035
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**1.3**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508300006

GC Semivolatiles

Lot-Sample #...: A5J250202-041 **Work Order #...:** HNJHL1AA **Matrix.....:** TA
Date Sampled...: 08/25/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5306032
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	214 DIL,*	(31 - 131)
Decachlorobiphenyl	142 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508300006

GC Semivolatiles

Lot-Sample #...: A5J250202-041 **Work Order #...:** HNJHL1AC **Matrix.....:** TA
Date Sampled...: 08/25/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/11/05
Prep Batch #...: 5306033
Dilution Factor: 10
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	330	ug/kg
Aroclor 1221	ND	330	ug/kg
Aroclor 1232	ND	330	ug/kg
Aroclor 1242	ND	330	ug/kg
Aroclor 1248	ND	330	ug/kg
Aroclor 1254	**1700**	**330**	**ug/kg**
Aroclor 1260	ND	330	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	148 DIL	(10 - 172)
Decachlorobiphenyl	197 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508300006

GC Semivolatiles

Lot-Sample #...: A5J250202-041 **Work Order #...:** HNJHL1AD **Matrix.....:** TA
Date Sampled...: 08/25/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/03/05
Prep Batch #...: 5306035
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**14**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508300007

GC Semivolatiles

Lot-Sample #...: A5J250202-042 **Work Order #...:** HNJHN1AA **Matrix.....:** TA
Date Sampled...: 08/25/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5306032
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	291 DIL,*	(31 - 131)
Decachlorobiphenyl	138 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508300007

GC Semivolatiles

Lot-Sample #...: A5J250202-042 **Work Order #...:** HNJHN1AC **Matrix.....:** TA
Date Sampled...: 08/25/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/11/05
Prep Batch #...: 5306033
Dilution Factor: 10
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	330	ug/kg
Aroclor 1221	ND	330	ug/kg
Aroclor 1232	ND	330	ug/kg
Aroclor 1242	ND	330	ug/kg
Aroclor 1248	ND	330	ug/kg
Aroclor 1254	**2200**	**330**	**ug/kg**
Aroclor 1260	ND	330	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	162 DIL	(10 - 172)
Decachlorobiphenyl	154 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508300007

GC Semivolatiles

Lot-Sample #...: A5J250202-042 **Work Order #...:** HNJHN1AD **Matrix.....:** TA
Date Sampled...: 08/25/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/03/05
Prep Batch #...: 5306035
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**5.3**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508300008

GC Semivolatiles

Lot-Sample #...: A5J250202-043 **Work Order #...:** HNJHP1AA **Matrix.....:** TA
Date Sampled...: 08/25/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5306032
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	142 DIL,*	(31 - 131)
Decachlorobiphenyl	178 DIL,*	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508300008

GC Semivolatiles

Lot-Sample #...: A5J250202-043 **Work Order #...:** HNJHP1AC **Matrix.....:** TA
Date Sampled...: 08/25/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/11/05
Prep Batch #...: 5306033
Dilution Factor: 10
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	330	ug/kg
Aroclor 1221	ND	330	ug/kg
Aroclor 1232	ND	330	ug/kg
Aroclor 1242	ND	330	ug/kg
Aroclor 1248	ND	330	ug/kg
Aroclor 1254	**2900**	**330**	**ug/kg**
Aroclor 1260	ND	330	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	209 DIL,*	(10 - 172)
Decachlorobiphenyl	247 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508300008

GC Semivolatiles

Lot-Sample #...: A5J250202-043 **Work Order #...:** HNJHP1AD **Matrix.....:** TA
Date Sampled...: 08/25/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/03/05
Prep Batch #...: 5306035
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**8.7**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508300009

GC Semivolatiles

Lot-Sample #...: A5J250202-044 **Work Order #...:** HNJHQ1AA **Matrix.....:** TA
Date Sampled...: 08/25/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/05/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5309028
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	530	ug/kg
alpha-BHC	ND	530	ug/kg
beta-BHC	ND	530	ug/kg
delta-BHC	ND	530	ug/kg
gamma-BHC (Lindane)	ND	530	ug/kg
Chlordane (technical)	ND	5300	ug/kg
4,4'-DDD	ND	530	ug/kg
4,4'-DDE	ND	530	ug/kg
4,4'-DDT	ND	530	ug/kg
Dieldrin	ND	530	ug/kg
Endrin	ND	530	ug/kg
Endrin aldehyde	ND	530	ug/kg
Endosulfan I	ND	530	ug/kg
Endosulfan II	ND	530	ug/kg
Endosulfan sulfate	ND	530	ug/kg
Heptachlor	ND	530	ug/kg
Heptachlor epoxide	ND	530	ug/kg
Methoxychlor	ND	1000	ug/kg
Toxaphene	ND	21000	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	187 DIL,*	(31 - 131)
Decachlorobiphenyl	166 DIL,*	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508300009

GC Semivolatiles

Lot-Sample #...: A5J250202-044 **Work Order #...:** HNJHQ1AC **Matrix.....:** TA
Date Sampled...: 08/25/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/05/05 **Analysis Date..:** 11/08/05
Prep Batch #...: 5309030
Dilution Factor: 2
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	66	ug/kg
Aroclor 1221	ND	66	ug/kg
Aroclor 1232	ND	66	ug/kg
Aroclor 1242	ND	66	ug/kg
Aroclor 1248	ND	66	ug/kg
Aroclor 1254	**260**	**66**	**ug/kg**
Aroclor 1260	ND	66	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	98	(10 - 172)
Decachlorobiphenyl	70	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508300009

GC Semivolatiles

Lot-Sample #...: A5J250202-044 **Work Order #...:** HNJHQ1AD **Matrix.....:** TA
Date Sampled...: 08/25/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/05/05 **Analysis Date..:** 11/06/05
Prep Batch #...: 5309027
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**6.3 B**		**%**

NOTE(S):

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508300010

GC Semivolatiles

Lot-Sample #...: A5J250202-045 **Work Order #...:** HNJHT1AA **Matrix.....:** TA
Date Sampled...: 08/25/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5306032
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	197 DIL,*	(31 - 131)
Decachlorobiphenyl	144 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508300010

GC Semivolatiles

Lot-Sample #...: A5J250202-045 **Work Order #...:** HNJHT1AC **Matrix.....:** TA
Date Sampled...: 08/25/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/11/05
Prep Batch #...: 5306033
Dilution Factor: 10
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	330	ug/kg
Aroclor 1221	ND	330	ug/kg
Aroclor 1232	ND	330	ug/kg
Aroclor 1242	ND	330	ug/kg
Aroclor 1248	ND	330	ug/kg
Aroclor 1254	**2200**	**330**	**ug/kg**
Aroclor 1260	ND	330	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	199 DIL,*	(10 - 172)
Decachlorobiphenyl	193 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508300010

GC Semivolatiles

Lot-Sample #...: A5J250202-045 **Work Order #...:** HNJHT1AD **Matrix.....:** TA
Date Sampled...: 08/25/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/03/05
Prep Batch #...: 5306035
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**9.0**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0510210001

GC Semivolatiles

Lot-Sample #...: A5J250202-046 **Work Order #...:** HNJH21AA **Matrix.....:** TA
Date Sampled...: 10/04/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5306032
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	171 DIL,*	(31 - 131)
Decachlorobiphenyl	181 DIL,*	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0510210001

GC Semivolatiles

Lot-Sample #...: A5J250202-046 **Work Order #...:** HNJH21AC **Matrix.....:** TA
Date Sampled...: 10/04/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/11/05
Prep Batch #...: 5306033
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	**130**	**33**	**ug/kg**
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	149	(10 - 172)
Decachlorobiphenyl	120	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: R-0510210001

GC Semivolatiles

Lot-Sample #...: A5J250202-046 **Work Order #...:** HNJH21AD **Matrix.....:** TA
Date Sampled...: 10/04/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/03/05
Prep Batch #...: 5306035
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**2.7**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0510210002

GC Semivolatiles

Lot-Sample #...: A5J250202-047 **Work Order #...:** HNJH51AA **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5306032
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	676 DIL,*	(31 - 131)
Decachlorobiphenyl	150 DIL,*	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0510210002

GC Semivolatiles

Lot-Sample #...: A5J250202-047 **Work Order #...:** HNJH51AC **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/11/05
Prep Batch #...: 5306033
Dilution Factor: 5
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	160	ug/kg
Aroclor 1221	ND	160	ug/kg
Aroclor 1232	ND	160	ug/kg
Aroclor 1242	ND	160	ug/kg
Aroclor 1248	ND	160	ug/kg
Aroclor 1254	**2800**	**160**	**ug/kg**
Aroclor 1260	ND	160	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	300 DIL,*	(10 - 172)
Decachlorobiphenyl	509 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0510210002

GC Semivolatiles

Lot-Sample #...: A5J250202-047 **Work Order #...:** HNJH51AD **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/03/05
Prep Batch #...: 5306035
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**18**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0510210003

GC Semivolatiles

Lot-Sample #...: A5J250202-048 **Work Order #...:** HNJH61AA **Matrix.....:** TA
Date Sampled...: 08/16/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5306032
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	441 DIL,*	(31 - 131)
Decachlorobiphenyl	160 DIL,*	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0510210003

GC Semivolatiles

Lot-Sample #...: A5J250202-048 **Work Order #...:** HNJH61AC **Matrix.....:** TA
Date Sampled...: 08/16/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/11/05
Prep Batch #...: 5306033
Dilution Factor: 2
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	66	ug/kg
Aroclor 1221	ND	66	ug/kg
Aroclor 1232	ND	66	ug/kg
Aroclor 1242	ND	66	ug/kg
Aroclor 1248	ND	66	ug/kg
Aroclor 1254	**790**	**66**	**ug/kg**
Aroclor 1260	ND	66	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	148	(10 - 172)
Decachlorobiphenyl	411 *	(40 - 138)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0510210003

GC Semivolatiles

Lot-Sample #...: A5J250202-048 **Work Order #...:** HNJH61AD **Matrix.....:** TA
Date Sampled...: 08/16/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/03/05
Prep Batch #...: 5306035
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**5.0**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0510210004

GC Semivolatiles

Lot-Sample #...: A5J250202-049 **Work Order #...:** HNJH71AA **Matrix.....:** TA
Date Sampled...: 08/25/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5306032
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	558 DIL,*	(31 - 131)
Decachlorobiphenyl	130 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0510210004

GC Semivolatiles

Lot-Sample #...: A5J250202-049 **Work Order #...:** HNJH71AC **Matrix.....:** TA
Date Sampled...: 08/25/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/11/05
Prep Batch #...: 5306033
Dilution Factor: 5
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	160	ug/kg
Aroclor 1221	ND	160	ug/kg
Aroclor 1232	ND	160	ug/kg
Aroclor 1242	ND	160	ug/kg
Aroclor 1248	ND	160	ug/kg
Aroclor 1254	**1400**	**160**	**ug/kg**
Aroclor 1260	ND	160	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	148 DIL	(10 - 172)
Decachlorobiphenyl	156 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0510210004

GC Semivolatiles

Lot-Sample #...: A5J250202-049 **Work Order #...:** HNJH71AD **Matrix.....:** TA
Date Sampled...: 08/25/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/03/05
Prep Batch #...: 5306035
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**5.7**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0510210005

GC Semivolatiles

Lot-Sample #...: A5J250202-050 **Work Order #...:** HNJH91AA **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5306032
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	615 DIL,*	(31 - 131)
Decachlorobiphenyl	115 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0510210005

GC Semivolatiles

Lot-Sample #...: A5J250202-050 **Work Order #...:** HNJH91AC **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/11/05
Prep Batch #...: 5306033
Dilution Factor: 2
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	66	ug/kg
Aroclor 1221	ND	66	ug/kg
Aroclor 1232	ND	66	ug/kg
Aroclor 1242	ND	66	ug/kg
Aroclor 1248	ND	66	ug/kg
Aroclor 1254	**560**	**66**	**ug/kg**
Aroclor 1260	ND	66	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	154	(10 - 172)
Decachlorobiphenyl	167 *	(40 - 138)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0510210005

GC Semivolatiles

Lot-Sample #...: A5J250202-050 **Work Order #...:** HNJH91AD **Matrix.....:** TA
Date Sampled...: 08/18/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/03/05
Prep Batch #...: 5306035
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**7.0**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0510210006

GC Semivolatiles

Lot-Sample #...: A5J250202-051 **Work Order #...:** HNJJC1AA **Matrix.....:** TA
Date Sampled...: 10/10/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5306032
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	482 DIL,*	(31 - 131)
Decachlorobiphenyl	109 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0510210006

GC Semivolatiles

Lot-Sample #...: A5J250202-051 **Work Order #...:** HNJJC1AC **Matrix.....:** TA
Date Sampled...: 10/10/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/11/05
Prep Batch #...: 5306033
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	135	(10 - 172)
Decachlorobiphenyl	102	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: R-0510210006

GC Semivolatiles

Lot-Sample #...: A5J250202-051 **Work Order #...:** HNJJC1AD **Matrix.....:** TA
Date Sampled...: 10/10/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/03/05
Prep Batch #...: 5306035
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**0.30**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0510140001

GC Semivolatiles

Lot-Sample #...: A5J250202-052 **Work Order #...:** HNJJE1AA **Matrix.....:** TA
Date Sampled...: 10/04/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5306032
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	416 DIL,*	(31 - 131)
Decachlorobiphenyl	125 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0510140001

GC Semivolatiles

Lot-Sample #...: A5J250202-052 **Work Order #...:** HNJJE1AC **Matrix.....:** TA
Date Sampled...: 10/04/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/11/05
Prep Batch #...: 5306033
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	**71**	**33**	**ug/kg**
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	125	(10 - 172)
Decachlorobiphenyl	108	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: R-0510140001

GC Semivolatiles

Lot-Sample #...: A5J250202-052 **Work Order #...:** HNJJE1AD **Matrix.....:** TA
Date Sampled...: 10/04/05 12:00 **Date Received..:** 10/24/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/03/05
Prep Batch #...: 5306035
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**2.2**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508290002

GC Semivolatiles

Lot-Sample #...: A5J250202-055 **Work Order #...:** HNN0D1AA **Matrix.....:** TA
Date Sampled...: 09/08/05 12:00 **Date Received..:** 10/26/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5306032
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	212 DIL,*	(31 - 131)
Decachlorobiphenyl	127 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508290002

GC Semivolatiles

Lot-Sample #...: A5J250202-055 **Work Order #...:** HNN0D1AC **Matrix.....:** TA
Date Sampled...: 09/08/05 12:00 **Date Received..:** 10/26/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/11/05
Prep Batch #...: 5306033
Dilution Factor: 5
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	160	ug/kg
Aroclor 1221	ND	160	ug/kg
Aroclor 1232	ND	160	ug/kg
Aroclor 1242	ND	160	ug/kg
Aroclor 1248	ND	160	ug/kg
Aroclor 1254	**1200**	**160**	**ug/kg**
Aroclor 1260	ND	160	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	929 DIL,*	(10 - 172)
Decachlorobiphenyl	756 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508290002

GC Semivolatiles

Lot-Sample #...: A5J250202-055 **Work Order #...:** HNN0D1AD **Matrix.....:** TA
Date Sampled...: 09/08/05 12:00 **Date Received..:** 10/26/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/03/05
Prep Batch #...: 5306035
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**2.0**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508290003

GC Semivolatiles

Lot-Sample #...: A5J250202-056 **Work Order #...:** HNN0E1AA **Matrix.....:** TA
Date Sampled...: 09/08/05 12:00 **Date Received..:** 10/26/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5306032
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	152 DIL,*	(31 - 131)
Decachlorobiphenyl	106 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508290003

GC Semivolatiles

Lot-Sample #...: A5J250202-056 **Work Order #...:** HNN0E1AC **Matrix.....:** TA
Date Sampled...: 09/08/05 12:00 **Date Received..:** 10/26/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/11/05
Prep Batch #...: 5306033
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	**150**	**33**	**ug/kg**
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	136	(10 - 172)
Decachlorobiphenyl	105	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: R-0508290003

GC Semivolatiles

Lot-Sample #...: A5J250202-056 **Work Order #...:** HNN0E1AD **Matrix.....:** TA
Date Sampled...: 09/08/05 12:00 **Date Received..:** 10/26/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/03/05
Prep Batch #...: 5306035
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**0.70**		**%**

Northeast Ohio Regional Sewer District

Client Sample ID: R-0510100001

GC Semivolatiles

Lot-Sample #...: A5J250202-057 **Work Order #...:** HNN0F1AA **Matrix.....:** TA
Date Sampled...: 10/10/05 12:00 **Date Received..:** 10/26/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5306032
Dilution Factor: 100
% Moisture.....: **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	170	ug/kg
alpha-BHC	ND	170	ug/kg
beta-BHC	ND	170	ug/kg
delta-BHC	ND	170	ug/kg
gamma-BHC (Lindane)	ND	170	ug/kg
Chlordane (technical)	ND	1700	ug/kg
4,4'-DDD	ND	170	ug/kg
4,4'-DDE	ND	170	ug/kg
4,4'-DDT	ND	170	ug/kg
Dieldrin	ND	170	ug/kg
Endrin	ND	170	ug/kg
Endrin aldehyde	ND	170	ug/kg
Endosulfan I	ND	170	ug/kg
Endosulfan II	ND	170	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Heptachlor	ND	170	ug/kg
Heptachlor epoxide	ND	170	ug/kg
Methoxychlor	ND	330	ug/kg
Toxaphene	ND	6700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	568 DIL,*	(31 - 131)
Decachlorobiphenyl	130 DIL	(18 - 145)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Elevated reporting limits. The reporting limits are elevated due to matrix interference.

Northeast Ohio Regional Sewer District

Client Sample ID: R-0510100001

GC Semivolatiles

Lot-Sample #...: A5J250202-057 **Work Order #...:** HNN0F1AC **Matrix.....:** TA
Date Sampled...: 10/10/05 12:00 **Date Received..:** 10/26/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/11/05
Prep Batch #...: 5306033
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	ND	33	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	124	(10 - 172)
Decachlorobiphenyl	92	(40 - 138)

Northeast Ohio Regional Sewer District

Client Sample ID: R-0510100001

GC Semivolatiles

Lot-Sample #...: A5J250202-057 **Work Order #...:** HNN0F1AD **Matrix.....:** TA
Date Sampled...: 10/10/05 12:00 **Date Received..:** 10/26/05
Prep Date.....: 11/02/05 **Analysis Date..:** 11/03/05
Prep Batch #...: 5306035
Dilution Factor: 1
% Moisture.....: **Method.....:** SW846 8290

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Percent Lipids	**0.30**		**%**

QUALITY CONTROL SECTION

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A5J250202 **Work Order #...:** HN2RG1AA **Matrix.....:** BIOLOGIC
MB Lot-Sample #: A5K010000-046

Prep Date.....: 11/01/05
Analysis Date..: 11/14/05 **Prep Batch #...:** 5305046
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aldrin	ND	1.7	ug/kg	SW846 8081A
alpha-BHC	ND	1.7	ug/kg	SW846 8081A
beta-BHC	ND	1.7	ug/kg	SW846 8081A
delta-BHC	ND	1.7	ug/kg	SW846 8081A
gamma-BHC (Lindane)	ND	1.7	ug/kg	SW846 8081A
Chlordane (technical)	ND	17	ug/kg	SW846 8081A
4,4'-DDD	ND	1.7	ug/kg	SW846 8081A
4,4'-DDE	ND	1.7	ug/kg	SW846 8081A
4,4'-DDT	ND	1.7	ug/kg	SW846 8081A
Dieldrin	ND	1.7	ug/kg	SW846 8081A
Endrin	ND	1.7	ug/kg	SW846 8081A
Endrin aldehyde	ND	1.7	ug/kg	SW846 8081A
Endosulfan I	ND	1.7	ug/kg	SW846 8081A
Endosulfan II	ND	1.7	ug/kg	SW846 8081A
Endosulfan sulfate	ND	1.7	ug/kg	SW846 8081A
Heptachlor	ND	1.7	ug/kg	SW846 8081A
Heptachlor epoxide	ND	1.7	ug/kg	SW846 8081A
Methoxychlor	ND	3.3	ug/kg	SW846 8081A
Toxaphene	ND	67	ug/kg	SW846 8081A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	69	(31 - 131)
Decachlorobiphenyl	97	(18 - 145)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A5J250202 **Work Order #...:** HN2RK1AA **Matrix.....:** BIOLOGIC
MB Lot-Sample #: A5K010000-064

Prep Date.....: 11/01/05
Analysis Date..: 11/15/05 **Prep Batch #...:** 5305064
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aldrin	ND	1.7	ug/kg	SW846 8081A
alpha-BHC	ND	1.7	ug/kg	SW846 8081A
beta-BHC	ND	1.7	ug/kg	SW846 8081A
delta-BHC	ND	1.7	ug/kg	SW846 8081A
gamma-BHC (Lindane)	ND	1.7	ug/kg	SW846 8081A
Chlordane (technical)	ND	17	ug/kg	SW846 8081A
4,4'-DDD	ND	1.7	ug/kg	SW846 8081A
4,4'-DDE	ND	1.7	ug/kg	SW846 8081A
4,4'-DDT	ND	1.7	ug/kg	SW846 8081A
Dieldrin	ND	1.7	ug/kg	SW846 8081A
Endrin	ND	1.7	ug/kg	SW846 8081A
Endrin aldehyde	ND	1.7	ug/kg	SW846 8081A
Endosulfan I	ND	1.7	ug/kg	SW846 8081A
Endosulfan II	ND	1.7	ug/kg	SW846 8081A
Endosulfan sulfate	ND	1.7	ug/kg	SW846 8081A
Heptachlor	ND	1.7	ug/kg	SW846 8081A
Heptachlor epoxide	ND	1.7	ug/kg	SW846 8081A
Methoxychlor	ND	3.3	ug/kg	SW846 8081A
Toxaphene	ND	67	ug/kg	SW846 8081A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	59	(31 - 131)
Decachlorobiphenyl	93	(18 - 145)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A5J250202 **Work Order #...:** HN5WK1AA **Matrix.....:** BIOLOGIC
MB Lot-Sample #: A5K020000-032

Prep Date.....: 11/02/05
Analysis Date..: 11/15/05 **Prep Batch #...:** 5306032
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aldrin	ND	1.7	ug/kg	SW846 8081A
alpha-BHC	ND	1.7	ug/kg	SW846 8081A
beta-BHC	ND	1.7	ug/kg	SW846 8081A
delta-BHC	ND	1.7	ug/kg	SW846 8081A
gamma-BHC (Lindane)	ND	1.7	ug/kg	SW846 8081A
Chlordane (technical)	ND	17	ug/kg	SW846 8081A
4,4'-DDD	ND	1.7	ug/kg	SW846 8081A
4,4'-DDE	ND	1.7	ug/kg	SW846 8081A
4,4'-DDT	**5.4**	**1.7**	**ug/kg**	**SW846 8081A**
Dieldrin	ND	1.7	ug/kg	SW846 8081A
Endrin	ND	1.7	ug/kg	SW846 8081A
Endrin aldehyde	ND	1.7	ug/kg	SW846 8081A
Endosulfan I	ND	1.7	ug/kg	SW846 8081A
Endosulfan II	ND	1.7	ug/kg	SW846 8081A
Endosulfan sulfate	ND	1.7	ug/kg	SW846 8081A
Heptachlor	ND	1.7	ug/kg	SW846 8081A
Heptachlor epoxide	ND	1.7	ug/kg	SW846 8081A
Methoxychlor	ND	3.3	ug/kg	SW846 8081A
Toxaphene	ND	67	ug/kg	SW846 8081A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	75	(31 - 131)
Decachlorobiphenyl	72	(18 - 145)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A5J250202 **Work Order #...:** HPGLA1AA **Matrix.....:** BIOLOGIC
MB Lot-Sample #: A5K050000-028

Prep Date.....: 11/05/05
Analysis Date..: 11/15/05 **Prep Batch #...:** 5309028
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aldrin	ND	5.3	ug/kg	SW846 8081A
alpha-BHC	ND	5.3	ug/kg	SW846 8081A
beta-BHC	ND	5.3	ug/kg	SW846 8081A
delta-BHC	ND	5.3	ug/kg	SW846 8081A
gamma-BHC (Lindane)	ND	5.3	ug/kg	SW846 8081A
Chlordane (technical)	ND	53	ug/kg	SW846 8081A
4,4'-DDD	ND	5.3	ug/kg	SW846 8081A
4,4'-DDE	ND	5.3	ug/kg	SW846 8081A
4,4'-DDT	ND	5.3	ug/kg	SW846 8081A
Dieldrin	ND	5.3	ug/kg	SW846 8081A
Endrin	ND	5.3	ug/kg	SW846 8081A
Endrin aldehyde	ND	5.3	ug/kg	SW846 8081A
Endosulfan I	ND	5.3	ug/kg	SW846 8081A
Endosulfan II	ND	5.3	ug/kg	SW846 8081A
Endosulfan sulfate	ND	5.3	ug/kg	SW846 8081A
Heptachlor	ND	5.3	ug/kg	SW846 8081A
Heptachlor epoxide	ND	5.3	ug/kg	SW846 8081A
Methoxychlor	ND	10	ug/kg	SW846 8081A
Toxaphene	ND	210	ug/kg	SW846 8081A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	72	(31 - 131)
Decachlorobiphenyl	57	(18 - 145)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A5J250202 **Work Order #...:** HN2RD1AA **Matrix.....:** BIOLOGIC
MB Lot-Sample #: A5K010000-045

Prep Date.....: 11/01/05
Analysis Date..: 11/09/05 **Prep Batch #...:** 5305045
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aroclor 1016	ND	33	ug/kg	SW846 8082
Aroclor 1221	ND	33	ug/kg	SW846 8082
Aroclor 1232	ND	33	ug/kg	SW846 8082
Aroclor 1242	ND	33	ug/kg	SW846 8082
Aroclor 1248	ND	33	ug/kg	SW846 8082
Aroclor 1254	ND	33	ug/kg	SW846 8082
Aroclor 1260	ND	33	ug/kg	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	70	(10 - 172)
Decachlorobiphenyl	76	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A5J250202 **Work Order #...:** HN2RJ1AA **Matrix.....:** BIOLOGIC
MB Lot-Sample #: A5K010000-063

Prep Date.....: 11/01/05
Analysis Date..: 11/10/05 **Prep Batch #...:** 5305063
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aroclor 1016	ND	33	ug/kg	SW846 8082
Aroclor 1221	ND	33	ug/kg	SW846 8082
Aroclor 1232	ND	33	ug/kg	SW846 8082
Aroclor 1242	ND	33	ug/kg	SW846 8082
Aroclor 1248	ND	33	ug/kg	SW846 8082
Aroclor 1254	ND	33	ug/kg	SW846 8082
Aroclor 1260	ND	33	ug/kg	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	53	(10 - 172)
Decachlorobiphenyl	73	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A5J250202 **Work Order #...:** HN5WL1AA **Matrix.....:** BIOLOGIC
MB Lot-Sample #: A5K020000-033

Prep Date.....: 11/02/05
Analysis Date..: 11/11/05 **Prep Batch #...:** 5306033
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aroclor 1016	ND	33	ug/kg	SW846 8082
Aroclor 1221	ND	33	ug/kg	SW846 8082
Aroclor 1232	ND	33	ug/kg	SW846 8082
Aroclor 1242	ND	33	ug/kg	SW846 8082
Aroclor 1248	ND	33	ug/kg	SW846 8082
Aroclor 1254	ND	33	ug/kg	SW846 8082
Aroclor 1260	ND	33	ug/kg	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	117	(10 - 172)
Decachlorobiphenyl	108	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A5J250202 **Work Order #...:** HPGLQ1AA **Matrix.....:** BIOLOGIC
MB Lot-Sample #: A5K050000-030

Prep Date.....: 11/05/05
Analysis Date..: 11/08/05 **Prep Batch #...:** 5309030
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aroclor 1016	ND	33	ug/kg	SW846 8082
Aroclor 1221	ND	33	ug/kg	SW846 8082
Aroclor 1232	ND	33	ug/kg	SW846 8082
Aroclor 1242	ND	33	ug/kg	SW846 8082
Aroclor 1248	ND	33	ug/kg	SW846 8082
Aroclor 1254	ND	33	ug/kg	SW846 8082
Aroclor 1260	ND	33	ug/kg	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	94	(10 - 172)
Decachlorobiphenyl	87	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A5J250202 **Work Order #...:** HP4191AA **Matrix.....:** BIOLOGIC
MB Lot-Sample #: A5K140000-201

Prep Date.....: 11/11/05
Analysis Date..: 11/14/05 **Prep Batch #...:** 5318201
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aroclor 1016	ND	33	ug/kg	SW846 8082
Aroclor 1221	ND	33	ug/kg	SW846 8082
Aroclor 1232	ND	33	ug/kg	SW846 8082
Aroclor 1242	ND	33	ug/kg	SW846 8082
Aroclor 1248	ND	33	ug/kg	SW846 8082
Aroclor 1254	ND	33	ug/kg	SW846 8082
Aroclor 1260	ND	33	ug/kg	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	79	(10 - 172)
Decachlorobiphenyl	80	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A5J250202 **Work Order #...:** HN2RA1AA **Matrix.....:** BIOLOGIC
MB Lot-Sample #: A5K010000-044
Prep Date.....: 11/01/05
Analysis Date..: 11/02/05 **Prep Batch #...:** 5305044
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Percent Lipids	ND	--	%	SW846 8290

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A5J250202 **Work Order #...:** HN2RH1AA **Matrix.....:** BIOLOGIC
MB Lot-Sample #: A5K010000-062
Prep Date.....: 11/01/05
Analysis Date..: 11/02/05 **Prep Batch #...:** 5305062
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Percent Lipids	**0.30**	--	**%**	**SW846 8290**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A5J250202 **Work Order #...:** HN5WM1AA **Matrix.....:** BIOLOGIC
MB Lot-Sample #: A5K020000-035
Prep Date.....: 11/02/05
Analysis Date..: 11/03/05 **Prep Batch #...:** 5306035
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Percent Lipids	ND	--	%	SW846 8290

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A5J250202 **Work Order #...:** HPGK71AA **Matrix.....:** BIOLOGIC
MB Lot-Sample #: A5K050000-027
Prep Date.....: 11/05/05
Analysis Date..: 11/06/05 **Prep Batch #...:** 5309027
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Percent Lipids	**0.30**	--	**%**	**SW846 8290**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A5J250202 **Work Order #...:** HN2RG1AC-LCS **Matrix.....:** BIOLOGIC
LCS Lot-Sample#: A5K010000-046 HN2RG1AD-LCSD
Prep Date.....: 11/01/05 **Analysis Date..:** 11/14/05
Prep Batch #...: 5305046
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aldrin	**83**	**(39 - 122)**			**SW846 8081A**
	83	**(39 - 122)**	**0.57**	**(0-40)**	**SW846 8081A**
gamma-BHC (Lindane)	**85**	**(47 - 130)**			**SW846 8081A**
	76	**(47 - 130)**	**11**	**(0-36)**	**SW846 8081A**
4,4'-DDT	**94**	**(35 - 144)**			**SW846 8081A**
	90	**(35 - 144)**	**4.4**	**(0-42)**	**SW846 8081A**
Dieldrin	**91**	**(45 - 128)**			**SW846 8081A**
	84	**(45 - 128)**	**7.7**	**(0-33)**	**SW846 8081A**
Endrin	**97**	**(47 - 133)**			**SW846 8081A**
	90	**(47 - 133)**	**7.5**	**(0-38)**	**SW846 8081A**
Heptachlor	**89**	**(39 - 126)**			**SW846 8081A**
	78	**(39 - 126)**	**12**	**(0-44)**	**SW846 8081A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	75	(31 - 131)
	81	(31 - 131)
Decachlorobiphenyl	95	(18 - 145)
	99	(18 - 145)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A5J250202 **Work Order #...:** HN2RK1AC-LCS **Matrix.....:** BIOLOGIC
LCS Lot-Sample#: A5K010000-064 HN2RK1AD-LCSD
Prep Date.....: 11/01/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5305064
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aldrin	**77**	**(39 - 122)**			**SW846 8081A**
	68	**(39 - 122)**	**13**	**(0-40)**	**SW846 8081A**
gamma-BHC (Lindane)	**78**	**(47 - 130)**			**SW846 8081A**
	70	**(47 - 130)**	**11**	**(0-36)**	**SW846 8081A**
4,4'-DDT	**91**	**(35 - 144)**			**SW846 8081A**
	82	**(35 - 144)**	**11**	**(0-42)**	**SW846 8081A**
Dieldrin	**86**	**(45 - 128)**			**SW846 8081A**
	79	**(45 - 128)**	**8.6**	**(0-33)**	**SW846 8081A**
Endrin	**91**	**(47 - 133)**			**SW846 8081A**
	84	**(47 - 133)**	**8.6**	**(0-38)**	**SW846 8081A**
Heptachlor	**84**	**(39 - 126)**			**SW846 8081A**
	75	**(39 - 126)**	**12**	**(0-44)**	**SW846 8081A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	95	(31 - 131)
	61	(31 - 131)
Decachlorobiphenyl	87	(18 - 145)
	74	(18 - 145)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A5J250202 **Work Order #...:** HN5WK1AC-LCS **Matrix.....:** BIOLOGIC
LCS Lot-Sample#: A5K020000-032 HN5WK1AD-LCSD
Prep Date.....: 11/02/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5306032
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aldrin	**89**	**(39 - 122)**			**SW846 8081A**
	89	**(39 - 122)**	**1.0**	**(0-40)**	**SW846 8081A**
gamma-BHC (Lindane)	**92**	**(47 - 130)**			**SW846 8081A**
	92	**(47 - 130)**	**0.65**	**(0-36)**	**SW846 8081A**
4,4'-DDT	**123**	**(35 - 144)**			**SW846 8081A**
	113	**(35 - 144)**	**8.4**	**(0-42)**	**SW846 8081A**
Dieldrin	**98**	**(45 - 128)**			**SW846 8081A**
	92	**(45 - 128)**	**6.2**	**(0-33)**	**SW846 8081A**
Endrin	**105**	**(47 - 133)**			**SW846 8081A**
	94	**(47 - 133)**	**12**	**(0-38)**	**SW846 8081A**
Heptachlor	**98**	**(39 - 126)**			**SW846 8081A**
	97	**(39 - 126)**	**1.5**	**(0-44)**	**SW846 8081A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	81	(31 - 131)
	99	(31 - 131)
Decachlorobiphenyl	89	(18 - 145)
	83	(18 - 145)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A5J250202 **Work Order #...:** HPGLA1AC-LCS **Matrix.....:** BIOLOGIC
LCS Lot-Sample#: A5K050000-028 HPGLA1AD-LCSD
Prep Date.....: 11/05/05 **Analysis Date..:** 11/15/05
Prep Batch #...: 5309028
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aldrin	**81**	**(39 - 122)**			**SW846 8081A**
	94	**(39 - 122)**	**16**	**(0-40)**	**SW846 8081A**
gamma-BHC (Lindane)	**86**	**(47 - 130)**			**SW846 8081A**
	95	**(47 - 130)**	**9.8**	**(0-36)**	**SW846 8081A**
4,4'-DDT	**85**	**(35 - 144)**			**SW846 8081A**
	101	**(35 - 144)**	**17**	**(0-42)**	**SW846 8081A**
Dieldrin	**82**	**(45 - 128)**			**SW846 8081A**
	95	**(45 - 128)**	**14**	**(0-33)**	**SW846 8081A**
Endrin	**88**	**(47 - 133)**			**SW846 8081A**
	98	**(47 - 133)**	**11**	**(0-38)**	**SW846 8081A**
Heptachlor	**91**	**(39 - 126)**			**SW846 8081A**
	101	**(39 - 126)**	**10**	**(0-44)**	**SW846 8081A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	94	(31 - 131)
	100	(31 - 131)
Decachlorobiphenyl	69	(18 - 145)
	81	(18 - 145)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A5J250202 **Work Order #...:** HN2RD1AC-LCS **Matrix.....:** BIOLOGIC
LCS Lot-Sample#: A5K010000-045 HN2RD1AD-LCSD
Prep Date.....: 11/01/05 **Analysis Date..:** 11/09/05
Prep Batch #...: 5305045
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aroclor 1016	**85**	**(41 - 130)**			**SW846 8082**
	82	**(41 - 130)**	**4.0**	**(0-30)**	**SW846 8082**
Aroclor 1260	**99**	**(42 - 130)**			**SW846 8082**
	104	**(42 - 130)**	**5.1**	**(0-30)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	66	(10 - 172)
	65	(10 - 172)
Decachlorobiphenyl	76	(40 - 138)
	104	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A5J250202 **Work Order #...:** HN2RJ1AC-LCS **Matrix.....:** BIOLOGIC
LCS Lot-Sample#: A5K010000-063 HN2RJ1AD-LCSD
Prep Date.....: 11/01/05 **Analysis Date..:** 11/10/05
Prep Batch #...: 5305063
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aroclor 1016	**58**	**(41 - 130)**			**SW846 8082**
	90 p	**(41 - 130)**	**43**	**(0-30)**	**SW846 8082**
Aroclor 1260	**68**	**(42 - 130)**			**SW846 8082**
	102 p	**(42 - 130)**	**40**	**(0-30)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	47	(10 - 172)
	89	(10 - 172)
Decachlorobiphenyl	65	(40 - 138)
	96	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A5J250202 **Work Order #...:** HN5WL1AC-LCS **Matrix.....:** BIOLOGIC
LCS Lot-Sample#: A5K020000-033 HN5WL1AD-LCSD
Prep Date.....: 11/02/05 **Analysis Date..:** 11/11/05
Prep Batch #...: 5306033
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aroclor 1016	**113**	**(41 - 130)**			**SW846 8082**
	106	**(41 - 130)**	**6.5**	**(0-30)**	**SW846 8082**
Aroclor 1260	**124**	**(42 - 130)**			**SW846 8082**
	119	**(42 - 130)**	**4.0**	**(0-30)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	118	(10 - 172)
	120	(10 - 172)
Decachlorobiphenyl	115	(40 - 138)
	111	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A5J250202 **Work Order #...:** HPGLQ1AC-LCS **Matrix.....:** BIOLOGIC
LCS Lot-Sample#: A5K050000-030 HPGLQ1AD-LCSD
Prep Date.....: 11/05/05 **Analysis Date..:** 11/08/05
Prep Batch #...: 5309030
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aroclor 1016	**79**	**(41 - 130)**			**SW846 8082**
	91	**(41 - 130)**	**14**	**(0-30)**	**SW846 8082**
Aroclor 1260	**82**	**(42 - 130)**			**SW846 8082**
	103	**(42 - 130)**	**23**	**(0-30)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	76	(10 - 172)
	90	(10 - 172)
Decachlorobiphenyl	65	(40 - 138)
	81	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A5J250202 **Work Order #...:** HP4191AC-LCS **Matrix.....:** BIOLOGIC
LCS Lot-Sample#: A5K140000-201 HP4191AD-LCSD
Prep Date.....: 11/11/05 **Analysis Date..:** 11/14/05
Prep Batch #...: 5318201
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aroclor 1016	**81**	**(41 - 130)**			**SW846 8082**
	79	**(41 - 130)**	**1.5**	**(0-30)**	**SW846 8082**
Aroclor 1260	**90**	**(42 - 130)**			**SW846 8082**
	83	**(42 - 130)**	**7.9**	**(0-30)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	83	(10 - 172)
	79	(10 - 172)
Decachlorobiphenyl	88	(40 - 138)
	78	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

STL North Canton
4101 Shuffle Drive N.W.
North Canton, OH 44720
phone 330-497-9396 fax 330-497-0772

Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

Client Contact	Project Manager:	Site Contact:	Date:	COC No: 1
Cheryl Soltis-Muth (NEORSD)	Tel/Fax:	Lab Contact:	Carrier:	1 of 5 COCs
4747 E. 49th St.	Analysis Turnaround Time			Job No.
Cuyahoga Hts, OH 44125	Calendar (C) or Work Days (W) C			
(216) 641-6000 ext. 2501 Phone	TAT if different from Below ___21 Days_____			SDG No.
(216) 641-8118 FAX	☐ 2 weeks			
Project Name: NEORSD Fish (STL Quote Number: 66082)	☐ 1 week			
Site: EMSC	☐ 2 days			
P O # :	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Biologic, 8081A, Pesticides	Biologic, 8082, PCBs	Biologic, 8290, % Lipids	Sample Specific Notes:
R-0508230014	09/28/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0508230015	09/28/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0508230016	09/28/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0508230017	09/28/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0508310002	09/21/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0508310004	09/21/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0509140011	09/22/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0509140012	09/22/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0509140013	09/22/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0509160001	10/06/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0509160002	10/06/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0509160003	10/06/05	12:00	Solid	Fish Tissue	1		X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other : Dry Ice

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments: *STL Quote Number: 66082*

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Beth Nottem	NEORSD	10/24/05 1000	Al Naidet	S.T.L.	10-24-05 1000
Relinquished by: Al Naidet	Company: S.T.L.	Date/Time: 10-24-05	Received by: LynneSanders	Company: STL	Date/Time: 10/24/05 1100 AMS
Relinquished by:	Company:	Date/Time: 1100	Received by:	Company:	Date/Time:

STL North Canton
4101 Shuffle Drive N.W.
North Canton, OH 44720
phone 330-497-9396 fax 330-497-0772

Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

Client Contact	Project Manager:	Site Contact:	Date:	COC No: 2
Cheryl Soltis-Muth (NEORSD)	Tel/Fax:	Lab Contact:	Carrier:	2 of 5 COCs
4747 E. 49th St.	Analysis Turnaround Time			Job No.
Cuyahoga Hts, OH 44125	Calendar (C) or Work Days (W) C			
(216) 641-6000 ext. 2501 Phone	TAT if different from Below 21 days			SDG No.
(216) 641-8118 FAX	☐ 2 weeks			
Project Name: NEORSD Fish (STL Quote Number: 66082)	☐ 1 week			
Site: EMSC	☐ 2 days			
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Biologic, 8081A, Pesticides	Biologic, 8082, PCBs	Biologic, 8290, % Lipids	Sample Specific Notes:
R-0509160004	10/14/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0509160029	10/13/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0509160030	10/13/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0509160032	10/13/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0508290002	09/08/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0508290003	09/08/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0508290004	09/08/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0510140001	10/04/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0509300001	10/04/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0509300003	10/04/05	12:00	Solid	Fish Tissue	1		X	X	X	
L-0508160017	08/18/05	12:00	Solid	Fish Tissue	1		X	X	X	
L-0508160018	08/18/05	12:00	Solid	Fish Tissue	1		X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other: Dry Ice

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☒ *Disposal By Lab* ☐ *Archive For _____ Months*

Special Instructions/QC Requirements & Comments: ***STL Quote Number: 66082***

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Beth Hothem	NEORSD	10/24/05 10:00	Al Waidet	STL	10-24-05 1800
Al Waidet	STL	10-24-05 1100	Ann Sanders	STL	10/24/05 1100AM
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

STL North Canton
4101 Shuffle Drive N.W.
North Canton, OH 44720
phone 330-497-9396 fax 330-497-0772

Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

Client Contact	Project Manager:	Site Contact:	Date:	COC No: 3
Cheryl Soltis-Muth (NEORSD)	Tel/Fax:	Lab Contact:	Carrier:	3 of 5 COCs
4747 E. 49th St.	Analysis Turnaround Time			Job No.
Cuyahoga Hts, OH 44125	Calendar (C) or Work Days (W) C			
(216) 641-6000 ext. 2501 Phone	TAT if different from Below ___21 days___			SDG No.
(216) 641-8118 FAX	☐ 2 weeks			
Project Name: NEORSD Fish (STL Quote Number: 66082)	☐ 1 week			
Site: EMSC	☐ 2 days			
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Biologic, 8081A, Pesticides	Biologic, 8082, PCBs	Biologic, 82/90, % Lipids	Sample Specific Notes:
L-0508160019	08/18/05	12:00	Solid	Fish Tissue	1		X	X	X	
L-0508160020	08/18/05	12:00	Solid	Fish Tissue	1		X	X	X	
L-0508160002	08/18/05	12:00	Solid	Fish Tissue	1		X	X	X	
L-0508160001	08/18/05	12:00	Solid	Fish Tissue	1		X	X	X	
L-0508160004	08/18/05	12:00	Solid	Fish Tissue	1		X	X	X	
L-0508190009	08/24/05	12:00	Solid	Fish Tissue	1		X	X	X	
L-0508190011	08/24/05	12:00	Solid	Fish Tissue	1		X	X	X	
L-0508190012	08/24/05	12:00	Solid	Fish Tissue	1		X	X	X	
L-0508150001	08/16/05	12:00	Solid	Fish Tissue	1		X	X	X	
L-0508150002	08/16/05	12:00	Solid	Fish Tissue	1		X	X	X	
L-0508150003	08/16/05	12:00	Solid	Fish Tissue	1		X	X	X	
L-0508150004	08/16/05	12:00	Solid	Fish Tissue	1		X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other: Dry Ice

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments: *STL Quote Number: 66082*

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Beth Nathan	NEORSD	10/24/05 10:00	Al Haidet	S.T.L.	10-24-05 1000
Relinquished by: Al Haidet	Company: S.T.L.	Date/Time: 10-24-05 1100	Received by: Anne Sanders	Company: STL	Date/Time: 10/24/05 1100
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

STL North Canton
4101 Shuffle Drive N.W.
North Canton, OH 44720
phone 330-497-9396 fax 330-497-0772

Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

Client Contact	Project Manager:	Site Contact:	Date:	COC No: 4
Cheryl Soltis-Muth (NEORSD)	Tel/Fax:	Lab Contact:	Carrier:	4 of 5 COCs
4747 E. 49th St.	Analysis Turnaround Time			Job No.
Cuyahoga Hts, OH 44125	Calendar (C) or Work Days (W) C			
(216) 641-6000 ext. 2501 Phone	TAT if different from Below 21 days			
(216) 641-8118 FAX	☐ 2 weeks			SDG No.
Project Name: NEORSD Fish (STL Quote Number 66082)	☐ 1 week			
Site: EMSC	☐ 2 days			
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Biologic, 8081A, Pesticides	Biologic, 8082, PCBs	Biologic, 8290, % Lipids	Sample Specific Notes:
L-0508150017	8/16/2005	12:00	Solid	Fish Tissue	1		X	X	X	
L-0508190001	8/18/05	12:00	Solid	Fish Tissue	1		X	X	X	
L-0508190002	8/18/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0508190002	8/24/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0508190003	8/24/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0508190004	8/24/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0510100001	10/10/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0510100002	10/10/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0508300006	8/25/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0508300007	8/25/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0508300008	8/25/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0508300009	8/25/05	12:00	Solid	Fish Tissue	1		X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other: Dry Ice

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☒ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments: ***STL Quote Number: 66082***

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Beth Hathaway	NEORSD	10/24/05 10:00			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	S.T.L.	10-24-05 1100	[signature] STL		10/24/05 1100
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

STL North Canton
4101 Shuffle Drive N.W.
North Canton, OH 44720
phone 330-497-9396 fax 330-497-0772

Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

Client Contact	Project Manager:	Site Contact:	Date:	COC No: 5
Cheryl Soltis-Muth (NEORSD)	Tel/Fax:	Lab Contact:	Carrier:	5 of 5 COCs
4747 E. 49th St.	Analysis Turnaround Time			Job No.
Cuyahoga Hts, OH 44125	Calendar (C) or Work Days (W) C			
(216) 641-6000 ext. 2501 Phone	TAT if different from Below 21 days			
(216) 641-8118 FAX	☐ 2 weeks			SDG No.
Project Name: NEORSD Fish (STL Quote Number 66082)	☐ 1 week			
Site: EMSC	☐ 2 days			
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Biologic, 8081A, Pesticides	Biologic, 8082, PCBs	Biologic, 8290, % Lipids	Sample Specific Notes:
R-0508300010	08/25/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0510210001	10/4/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0510210002	8/18/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0510210003	8/16/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0510210004	8/25/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0510210005	8/18/05	12:00	Solid	Fish Tissue	1		X	X	X	
R-0510210006	10/10/05	12:00	Solid	Fish Tissue	1		X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other: Dry Ice

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments: *STL Quote Number: 66082*

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Beth Nathan	NEORSD	10/24/05 1010	Al Haidet	STL	10-25-05 0800
Relinquished by: Al Haidet	Company: STL	Date/Time: 10-24-05 1100	Received by: Lynn Sanders	Company: STL	Date/Time: 10/24/05 1100
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

STL Cooler Receipt Form/Narrative **Lot Number:** 405250202
North Canton Facility

Client: NEORG Project: EMSL Quote#:
Cooler Received on: 10/24/05 Opened on: 10/25/05 by: Anne Sanders (Signature)
Fedx ☐ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ STL Courier ☑
Stetson ☐ US Cargo ☐ Other:
STL Cooler No# Foam Box ☐ Client Cooler ☑ Other

1. Were custody seals on the outside of the cooler? Yes ☐ No ☑ Intact? Yes ☐ No ☐ NA ☑
   If YES, Quantity
   Were the custody seals signed and dated? Yes ☐ No ☐ NA ☑
2. Shipper's packing slip attached to this form? Yes ☐ No ☐ NA ☑
3. Did custody papers accompany the samples? Yes ☑ No ☐ Relinquished by client? Yes ☑ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☑ No ☐
5. Packing material used: Bubble Wrap ☐ Foam ☐ None ☑ Other :
6. Cooler temperature upon receipt 3.0 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☐ ICE/H_2O Slurry ☐
COOLANT: Wet Ice ☐ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐ Dry ICE

7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☐ No ☑
9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☑
10. Were correct bottles used for the tests indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☐ NA ☑
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐
13. Was a Trip Blank present in the cooler? Yes ☐ No ☑ Were VOAs on the COC? Yes ☐ No ☑
14. Does the trip blank number match the cooler number in which it was received? Yes ☐ No ☐ NA ☑

Contacted PM LDE Date: 10/24/05 by: ANS via Voice Mail ☑ Verbal ☐ Other ☑
Concerning: neg. Temp #1 Email - 10/25/05

√	

1. CHAIN OF CUSTODY

The following discrepancies occurred:
9/16/05 9/22/05 9/22/05
√ Rec'd R-05080900005, R-05101400008 and R-05101400002 not on COC - all @ 12 PM. - log for tests on COC
Rec'd not rec - R-05080900002, R-05080900003, R-05101400001, R-05101000001 - Do Not Log

2. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.
Sample(s) were received in a broken container.

3. SAMPLE PRESERVATION

Sample(s) were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #* 091305-*HNO3; Sulfuric Acid Lot #* 041305-*H2SO4; Sodium Hydroxide Lot #* -041305 -*NaOH; Hydrochloric Acid Lot #* 100504 *HCl; Sodium Hydroxide and Zinc Acetate Lot #* 071604-*CH3COO2ZN/NaOH*
Sample(s) were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont.

SEVERN TRENT STL

END OF REPORT