WATER QUALITY MONITORING

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- Pedricktown Confined Disposal Facility Contaiment Loading and Water Quality Analysis, Prepared for U.S. Army Corps of Engineers by Versar, Inc. October 2000.

- Killcohook Confined Disposal Facility Water Quality Analysis, Prepared for U.S. Army Corps of Engineers byVersar, Inc. February 2001

PEDRICKTOWN CONFINED DISPOSAL FACILITY CONTAMINANT LOADING AND WATER QUALITY ANALYSIS

-FINAL REPORT-

Contract No. DACW61-95-D-0011
Task Order No. 0057

Prepared for

U.S. Army Corps of Engineers
Philadelphia District
Philadelphia, PA 19107-3390

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October 2000

EXECUTIVE SUMMARY

This study was undertaken in October 1998 in order to assess the role of an upland Confined Disposal Facility (CDF) in sequestering dredged material and sediment-bound contaminants, and to estimate the potential for mobilization of dissolved and suspended contaminants through the discharge of the dewatering weir. The U.S. Army Corps of Engineers (USACE), Philadelphia District established a comprehensive monitoring program at the Pedricktown North CDF to demonstrate compliance with relevant and applicable water quality standards defined by regional environmental agencies. Contaminant inputs and discharges from a CDF were monitored during an October and November 1998 dredging project in the Marcus Hook navigational range of the Delaware River. Throughout the project, inlet slurry samples of the dredged material and water samples from the site's de-watering weir, weir discharge plume, and a river background site were analyzed for metals, pesticides, volatile and semi-volatile organic compounds, and high-resolution PCBs. Water samples were compared to appropriate DRBC water quality criteria and daily chemical load techniques were used to estimate whether the discharge altered ambient concentrations in the river. The results of the chemical analysis of the discharge indicated that the dredging project resulted in only minor exceedances of water quality criteria. Analyte concentrations in the discharge rarely exceeded acute criteria during the monitoring. Analytes that exceeded DRBC water quality criteria were primarily metals that are present in background samples at levels similar to those in the weir and discharge plume. In addition, of the weir samples that exceeded their acute criteria, dissolved aluminum in one sample and dissolved zinc in 2 samples, detected concentrations of these metals were less than 44 percent higher than the respective criteria. The results of the daily chemical load analysis indicated that daily impacts on ambient river metals concentrations were very small and often no change resulted from the discharge. Where changes in river concentrations did occur, daily concentrations below the weir varied (higher and lower) from ambient conditions, no water quality criteria were violated.

Estimations of contaminant inputs to the disposal site, in mg chemical/L slurry, relative to the discharge from the weir, in mg chemical/L water, indicated that the Pedricktown North CDF was over 95 percent efficient at trapping contaminants found in the Marcus Hook range sediments. Mass balance calculations (subtracting the total volume of each chemical in the outfall from the input volumes) suggested that approximately 7.0 kg of PCBs were pumped into the site and only 0.02 kg were released back into the river through the weir. The site was also highly efficient at sequestering metals, removing them from the channel through dredging and allowing them to settle out of the water before being discharged into the estuary. In total about 3.6 million kg of metals were introduced into the CDF and only 3,600 kg were reintroduced into the river through the discharge weir. Approximately 99 percent of the contaminants introduced to the site and 90 percent of those released from the weir were the metals, aluminum, iron, and manganese, which are among the most common naturally occurring elements.

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1.0 INTRODUCTION

1.1 BACKGROUND

The U.S. Army Corps of Engineers (USACE) is responsible for maintaining safe navigation in the Delaware River. To evaluate potential environmental impacts of dredging the Philadelphia to the Sea channel, the USACE has conducted extensive studies. The majority of dredging is conducted using hydraulic dredging techniques. Environmental concerns over hydraulic dredging include the potential that contaminants trapped within river sediments will be released and mobilized to the water column (and hence to biota) at the cutter head and through the discharge water of Confined Disposal Facilities (CDFs). The Delaware River Philadelphia to the Sea project employs seven existing disposal sites for placement of dredged material. In a typical dredging operation hydraulically dredged material is pumped into an upland disposal site (a CDF) with a 25 percent sediment to 75 percent water ratio to facilitate efficient pumping of sediment and rock through the dredge pipeline. Upland disposal sites are designed to maximize the water's residence time in the CDF to allow suspended sediments associated with the dredged slurry time to settle out. Many chemical contaminants bind to solid particles rather than readily dissolve into water. Therefore, sequestering solids in upland CDFs also sequesters chemicals from the estuary.

Sediment contaminant concentrations and the potential for releases to the water column at the cutter head were addressed in an Environmental Impact Statement (EIS) (USACE 1997), in a special study of polychlorinated biphenyl (PCB) concentrations in navigational sediment (Burton 1997), and in an independent review of the USACE sediment contaminant data conducted by Delaware Department of Natural Resources and Environmental Control (DNREC 1999). In 1997, Versar examined the extent of PCB contamination in the Philadelphia to the Sea navigation channel by conducting extensive sampling of PCBs using high-resolution laboratory techniques. In general, the results of the Versar study showed lower PCB concentrations in the navigational channel relative to the shoals. In DNREC (1999) the concentration of contaminants surrounding dredge cutter heads was estimated as was metals contamination in river bends. DNREC described higher contaminant concentrations in river bends, and determined that if total suspended sediments could be maintained below 250 mg/L, water quality surrounding cutter heads would meet applicable criteria.

The present study was conducted by the USACE to address concerns related to the potential mobilization of contaminants through the discharge water of a typical CDF. To provide an estimate of what metals and organic contaminants may be mobilized during a typical dredging project, contaminant monitoring for a dredge maintenance project in the Marcus Hook range was conducted between October 6 and November 8, 1998. The Marcus Hook range of the Delaware provides a worst case scenario from a sediment perspective as this industrialized region of the Delaware River has generally higher concentrations of metals, PCBs, and organics relative to other upriver and down-river navigational ranges. For the Marcus Hook maintenance dredging project approximately 800,000 cubic yards of material was placed in a 567 acre upland disposal site known as Pedricktown North. This site is located on the eastern shore of the Delaware River in

Salem County, New Jersey, approximately 2 miles north of the town of Penns Grove (Figure 1-1).

1.2 OBJECTIVES AND STUDY APPROACH

The objectives of this study were to:

- evaluate the contaminant concentration in the weir discharge relative to regulatory criteria,
- estimate what percentage of contaminants in the dredged slurry are retained by the CDF,
- characterize and quantify metals, organics, and PCBs that are released back into the river by the CDF discharge, and
- calculate the daily chemical load in the CDF discharge.

This study was designed to determine the role a CDF may play in sequestering Delaware River contaminants. Historical studies conducted during material placement in upland disposal sites were used primarily to determine if water quality criteria were met during dredging operations. By simultaneously sampling dredged material contamination at the influent pipe and the weir discharge, we estimated how many kilograms of contaminants were retained by the CDF relative to how many kilograms that were released through the weir. The difference between the two and the percentage of contaminants retained by the CDF described the ability of the CDF to sequester bulk sediment contaminants.

The daily chemical load analysis is an analytical approach that allowed for consideration of daily impacts on river water quality resulting from the CDF discharge. The metals concentrations and volume of water being discharged were multiplied to assess the total metals loadings to the river. This was added to the total ambient river loading, and the relative change on the river water contaminant concentrations was estimated and compared to DRBC water quality criteria.

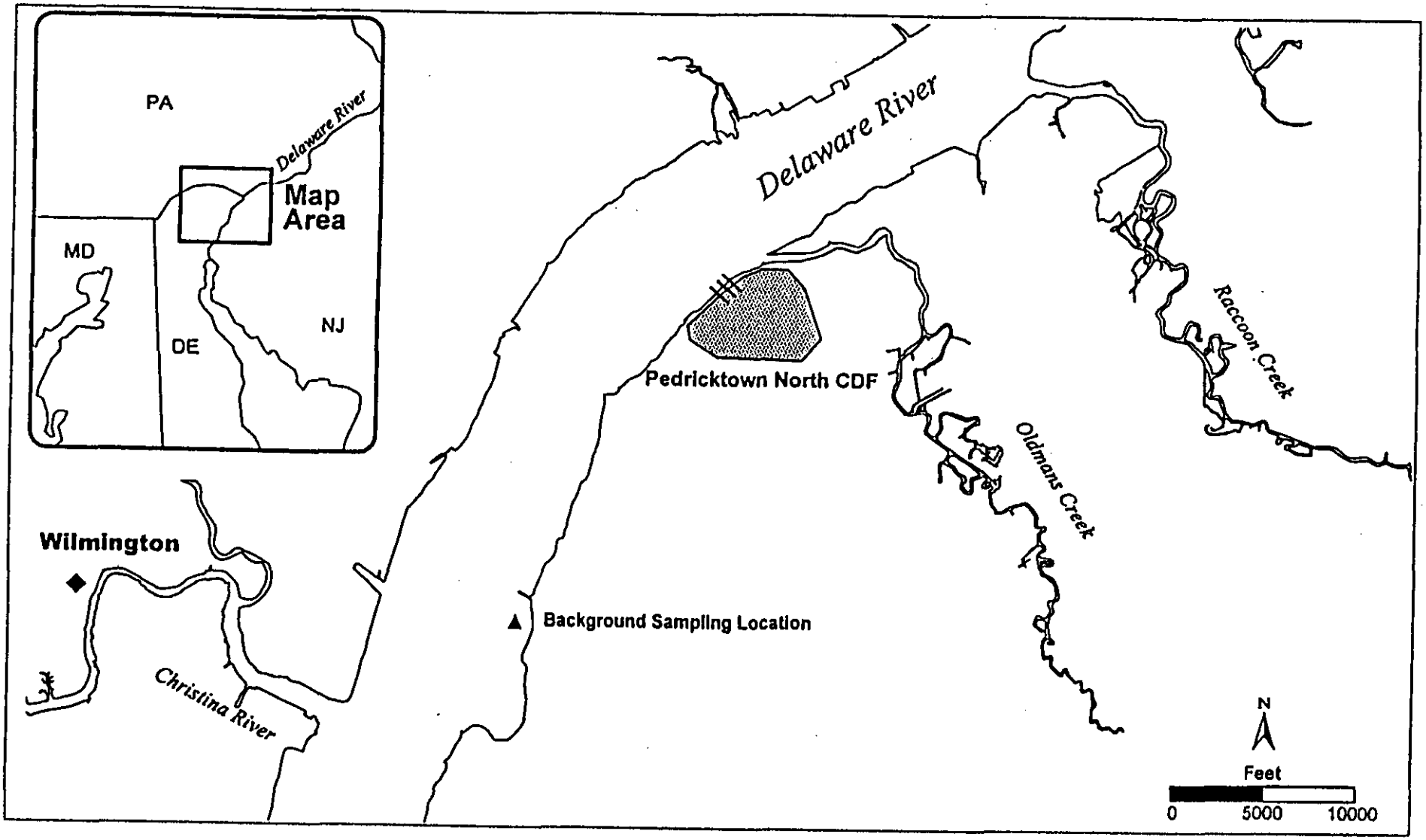

Figure 1-1. Map of Pedricktown confined disposal facility location

2. 0 STUDY DESIGN AND METHODS

The maintenance dredging operation that took place at Marcus Hook in fall 1998 was designed to last for approximately four weeks. In order to assess the range of chemical constituents that would be introduced to the CDF, the dredged material influent was sampled periodically during the dredging operation. Four influent samples were collected at the end of each week of dredging. Communications with the dredge operator confirmed the times of operation, as well as the progress of the project, such that all allocated influent samples could be collected during the period of active dredging.

Given the size and construction of the Pedricktown CDF, the residence time was roughly three weeks. Residence time is the length of time from when dredged material is placed in the site until the water portion of the slurry is discharged from the weir. Residence time is determined by several factors, including the size of the site; soil qualities, including type of substrate and dryness; and engineering controls, such as the division of the CDF into cells to direct water throughout the site. In addition, the presence of vegetation throughout a site can alter the residence time by slowing water and suspended material flow and through uptake of water. A CDF with a large residence time, such as Pedricktown, loses water to evaporation, uptake by vegetation, and through filtration into the ground. Although the dredge operation began in early October, the weir did not discharge water until October 27. Similarly, dredging was completed November 7, but the weir discharged through November 24. In total, $2.41*10^9$ (2.4 billion) liters of material were placed in the site. The influent slurry is roughly 75 percent water, which is equal to $1.81*10^9$ (1.8 billion) liters of water. A total of $3.89*10^8$ (389 million) liters of water were discharged through the weir, which is 21.5 percent of the total influent volume of water. Weir samples were collected throughout the period of water discharge from the CDF in order to monitor the water quality and estimate contaminant loadings released. A flow meter installed in one of the three discharge pipes enabled the entire outflow from the Pedricktown North CDF to be measured throughout the drainage period.

To evaluate contaminant concentrations in the vicinity of the weir, discharge plume samples were collected 140 yards downstream and toward the channel from the discharge pipes at a mid-water depth. A background location of similar physical characteristics was sampled in order to estimate ambient river conditions throughout the study. This background site was located along the eastern shore of the river, the same side as Pedricktown, approximately 2 miles south of the CDF, off the Penns Grove public beach (Figure 1-1). This site was selected because of its close proximity without influence of site-related activities, as well as similar physical conditions, and its relative distance from any known contaminant source. Samples were collected at a similar distance from shore and depth as the discharge plume samples in order to approximate conditions of the Pedricktown discharge.

2.1 FIELD METHODS

2.1.1 Water Quality Samples

All samples were analyzed for total suspended solids (TSS) and a full suite of chemical analytes, including volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, inorganic elements, and high-resolution congener specific PCBs. All samples other than influent samples were analyzed for both total and dissolved inorganics. Samples collected from the Pedricktown North weir, discharge plume, and background were compared to the DRBC water quality criteria.

2.1.1.1 Weir

The weir discharge was sampled using an ISCO® automatic sampler to obtain composite samples throughout the discharge period as well as daily TSS samples. The sampler consists of a peristaltic pump, controlled by a computer, which allows for collecting fixed amounts of water into sample containers over a period of time. The sample was collected through Teflon tubing that was suspended into the weir. The sample routine for this project was designed to collect water at 6-hour intervals. One liter sample jars for metals and PCBs were filled over the course of four days, and one 250-ml TSS container was filled each day. Two weir samples were not collected in this manner, the VOC and the SVOC, since the samples must be sealed immediately following collection. A composite weir sample was collected when the field crew arrived at the site, by manually starting the sampler pump and filling the sample container once per hour over a 6-hour period. After all other fieldwork was completed, the field crew would return to the weir, remove the VOC and SVOC sample, and reset the sampler for the original sampling routine.

2.1.1.2 Discharge Plume

Discharge plume samples were collected at slack tide, either high or low, depending on the tide cycle. Since the discharge pipe was between the high and low tide line, different methods of sampling had to be employed to sample the discharge plume at any tidal stage. A fixed-point station was erected at the designated distance, 140 yards from the discharge pipe, to be used for collecting high-slack samples. A pulley was affixed to the station, with a rope connecting back to a point above the high tide line on shore. A peristaltic pump, equivalent to the one used at the weir, was used to collect a mid-water sample (roughly 2-feet below the surface) by tying the suction head of the sampler to the line and pulling it out to the fixed station. A volume of water greater than twice the volume of the 100+ yards of Teflon tubing required to reach the fixed station was pumped through the sampler prior to collecting the samples.

When the sample was collected at low slack tide, the fixed station that represented the appropriate distance from the discharge pipe was much less than the required 140 yards from the effluent point of entry. Under these conditions, the discharge entered the river at water's edge. Therefore, the discharge plume sample was collected 140 yards from the water's edge using the same sampler designed for sampling at the fixed high-slack station. At low slack tide, a member of the field crew would wade out and hold the

sampler suction head at a mid-water depth. Again, a volume of water greater than twice the volume of the tubing was pumped through the sampler before the sample was collected.

2.1.1.3 Background

Background samples were collected following the methods established for low slack tide collection of the discharge plume area sample. The background sample location, off the Penns Grove public beach, south of the pier, was determined to be similar to the discharge plume site in physical regime and free from direct chemical influence from any known source of pollutants. Background samples were collected as close to slack tide as possible, given that the discharge plume sampling occurred at slack tide.

2.1.1.4 Influent

Given the high-pressure flow out of the influent pipe, a grab sample was taken using a swing-arm sampler with a Teflon beaker fixed onto one end. The beaker was lowered into the influent flow, at the point where the dredged material was falling into the accumulated dredged material in the CDF. This is an area of rapid mixing, which allowed for us to sample the influent as close to the point of origination as possible. The material was poured into sample containers and sealed immediately.

2.1.2 Flow Measurements

Inflow from the dredge was estimated using dredging logs. The total number of minutes spent dredging each day was multiplied by the pumping rate of the dredge (24,000,000 gallons per day). This rate is equivalent to 16,667 gallons per minute, which was used to determine the daily influent flow.

A transducer-type flow meter was fixed inside the most intact and accessible of the three discharge pipes. The flow meter was connected to a data-logging device that stored the discharge flow rate in 15-minute intervals. The data was downloaded onto a computer and reviewed twice each week during the sampling period to be certain the flow meter was operating correctly.

2.2 LABORATORY METHODS

Sample containers were promptly shipped following collection to the contract laboratories performing chemical analysis. The inorganic analyses, including total and dissolved inorganics as well as total cyanide, were performed by Envirosystems, Inc., Columbia, Maryland. All other analyses, except high-resolution PCBs, were performed by Kemron, Inc., Marietta, Ohio. Kemron used USEPA method 8260 for VOCs, 8270 for SVOCs, 8081 for pesticides, and 160.2 for TSS (Table 2-1).

Table 2-1. Analyte list, methods, and detection limits for chemical analyses (not including PCBs) used for the Pedricktown North CDF study

Analyte	Method	Detection Limit (µg/L)
Volatile Organics		
Chloromethane	8260	10
Chromomethane	8260	10
Vinyl Chloride	8260	10
Chloroethane	8260	10
Methylene Chloride	8260	5
Acetone	8260	10
Carbon disulfide	8260	5
1,1-Dichloroethene	8260	5
1,1-Dichloroethane	8260	5
1,2-Dichloroethene (Total)	8260	5
Chloroform	8260	5
1,2-Dichloroethane	8260	5
2-Butanone	8260	10
1,1,1-Trichloroethane	8260	5
Carbon Tetrachloride	8260	5
Bromodichloromethane	8260	5
1,2-Dichloropropane	8260	5
cis-1,3-Dichlorpropene	8260	5
Trichloroethene	8260	5
Dibromochlormethane	8260	5
1,1,2-Trichloroethane	8260	5
Benzene	8260	5
Trans-1,3-Dichloropropene	8260	5
Bromoform	8260	5
4-Methyl-2-pentanone	8260	10
2-Hexanone	8260	10
Tetrachloroethene	8260	5
1,1,2,2-Tetrachloroethane	8260	5
Toluene	8260	5
Chlorobenzene	8260	5
Ethyl benzene	8260	5
Styrene	8260	5
Xylenes, total	8260	5
Semivolatile Organics		
Phenol	8270	10
Bis(2-chloroethyl) ether	8270	10
2-Chlorophenol	8270	10
1,3-Dichlorobenzene	8270	10
1,4-Dichlorobenzene	8270	10

Table 2-1. Continued

Analyte	Method	Detection Limit (µg/L)
1,2-Dichlorobenzene	8270	10
2-Methylphenol	8270	10
Bis(2-Chloroisopropyl)ether	8270	10
4-Methylphenol	8270	10
N-Nitroso-di-n-propylamine	8270	10
Hexachloroethane	8270	10
Nitrobenzene	8270	10
Isophorone	8270	10
2-Nitrophenol	8270	10
2,4-Dimethylphenol	8270	10
Bis(2-Chloroethoxy)methane	8270	10
2,4-Dichlorophenol	8270	10
1,2,2-Trichlorobenzene	8270	10
Napthalene	8270	10
4-Chloroaniline	8270	10
Hexachlorobutadiene	8270	10
4-Chloro-3-methylphenol	8270	10
2-Methylnaphthlene	8270	10
Hexachlorocyclopentadiene	8270	10
2,4,6-Trichlorophenol	8270	10
2,4,5-Trichlorophenol	8270	50
2-Chloronaphthalene	8270	10
2-Nitroaniline	8270	50
Dimethylphthalate	8270	10
Acenaphthylene	8270	10
2,6-Dinitrotoluene	8270	10
3-Nitroaniline	8270	50
Acenaphthene	8270	10
2,4-Dinitrophenol	8270	50
4-Nitrophenol	8270	50
Dibenzofuran	8270	10
2,4-Dinitrotoluene	8270	10
Diethylphthalate	8270	10
4-Chlorophenyl-phenyl ether	8270	10
Fluorene	8270	10
4-Nitroaniline	8270	50
4,6-Dinitro-2-methylphenol	8270	50
N-nitrosodiphenylamine	8270	10
4-Bromophenyl-phenylether	8270	10
Hexachlorobenzene	8270	10
Pentachlorophenol	8270	50
Phenanthrene	8270	10

Table 2-1. Continued

Analyte	Method	Detection Limit (µg/L)
Anthracene	8270	10
Carbazole	8270	10
Di-N-butylphthalate	8270	10
Fluoranthene	8270	10
Pyrene	8270	10
Butylbenzylphthalate	8270	10
3,3'-Dichlorobenzidine	8270	20
Benzo(a)anthracene	8270	10
Chrysene	8270	10
bis(2-ethylhexyl)phthalate	8270	10
Di-N-octylphthalate	8270	10
Benzo(b)fluoranthene	8270	10
Benzo(k)fluoranthene	8270	10
Benzo(a)pyrene	8270	10
Indeno(1,2,3-cd)pyrene	8270	10
Dibenzo(a,h)Anthracene	8270	10
Benzo(g,h,I)perylene	8270	10
Pesticides		
Alpha-BHC	8081	0.055
beta-BHC	8081	0.055
Delta-BHC	8081	0.055
Gamma-BHC (Lindane)	8081	0.055
Heptachlor	8081	0.055
Aldrin	8081	0.055
Heptachlor epoxide	8081	0.055
Endosulfan I	8081	0.055
Dieldrin	8081	0.11
4,4'-DDE	8081	0.11
Endrin	8081	0.11
Endosulfan II	8081	0.11
4,4'-DDD	8081	0.11
Endosulfan sulfate	8081	0.11
4,4'-DDT	8081	0.11
Methoxychlor	8081	0.55
Endrin ketone	8081	0.11
Endrin aldehyde	8081	0.11
Alpha Chlordane	8081	0.055
Gamma Chlordane	8081	0.055
Toxaphene	8081	1.1

Table 2-1. Continued

Analyte	Method	Detection Limit (mg/L)
Inorganics		mg/L
Aluminum	200.7	0.007
Antimony	200.7	0.019
Arsenic	206.2	0.01
Barium	200.7	0.001
Beryllium	200.7	0.001
Cadmium	200.7	0.002
Calcium	200.7	0.001
Chromium	200.7	0.002
Cobalt	200.7	0.006
Copper	200.7	0.002
Cyanide	9010	0.01
Iron	200.7	0.005
Lead	239.2	0.001
Magnesium	200.7	0.001
Manganese	200.7	0.001
Mercury	245.1	0.0002
Nickel	200.7	0.002
Potassium	200.7	0.051
Selenium	270.2	0.001
Silver	200.7	0.002
Sodium	200.7	0.1
Thallium	279.2	0.001
Vanadium	200.7	0.003
Zinc	200.7	0.002
Total Suspended Solids	160.2	5

Dredged material is estimated to be composed of approximately 25 percent sediment and 75 percent water. In order to obtain chemical data for these samples, it was necessary for the laboratories to partition the influent samples into their liquid and solid portions for analysis. This allowed for the analysis of contaminants in the water fraction of the sample separately from the sediment-bound contaminants. After performing laboratory analysis, the concentrations of liquid- and solid-phase contaminants were summed based on the volume of the original sample that was liquid or solid, and a total concentration for the slurry sample was obtained. Sample containers were promptly shipped following collection to the contract laboratories performing chemical analysis. The inorganic analyses, including total and dissolved inorganics as well as total cyanide, were performed by Envirosystems, Inc., Columbia, Maryland. Influent samples, which were in slurry form, were handled differently from the other samples due to the high volume of suspended material.

High-resolution PCB analysis was conducted by Midwest Research Institute, Kansas City, Missouri. The analytical method (draft USEPA 1668) allowed for the identification of 77 mono-ortho and di-ortho PCB congeners as well as the 4 non-ortho coplanar PCBs (Table 2-2).

A high resolution gas chromatography (HRGC)/ high resolution mass spectrometry (HRMS) method was used for the non-ortho coplanar PCB congeners in all samples, and for the mono-and di-ortho congeners in inlet and weir samples. The HRGC/HRMS method allows for a detection limit of 1.25 ng/L for the mono- and di-ortho congeners and 25 pg/L for the non-ortho congeners in aqueous samples. Solid samples have detection limits of 0.125 ng/g for mono- and di-ortho congeners and 12.5 pg/g for non-ortho congeners. The inlet samples, which have aqueous and solid portions, were extracted separately and recombined based on the percent solids in each sample. For this reason, the detection limits for inlet samples (solid sample limits extrapolated to the slurry sample) vary based on the percent solids of each sample. A HRGC/low resolution mass spectrometry (LRMS) method that has a detection limit of 25 ng/L for aqueous samples was used for the mono- and di-ortho congeners for the discharge plume and background samples.

2.3 DATA ANALYSIS

2.3.1 Water Quality Criteria Comparison

Weir, discharge plume, and background were compared to relevant DRBC water quality criteria (DRBC 1996). Several of the criteria for inorganics are hardness-dependent values. For these compounds, the chronic criteria were calculated using the DRBC recommended guideline of a hardness of 74 mg/L. Acute criteria were calculated using hardness calculated from the discharge plume water quality data. This method of comparison is conservative in the use of chronic criteria because of the positive relationship between hardness and the criteria. The calculated hardness near Pedricktown North was an order of magnitude greater than 74 (the regulatory guideline), which would result in higher hardness-dependant screening levels. In addition, the use of acute criteria may provide a more realistic assessment of potential adverse effects resulting from short-term exposure to contaminants released from the Pedricktown North CDF, particularly under circumstances where individual chemical parameters only exceed screening criteria in one sample over the course of a dredging period.

The water quality criteria for inorganic elements defined by the DRBC are intended for comparison to dissolved metals concentrations. The justification for such a comparison is that only dissolved inorganics are biologically available, whereas particulate inorganics are not likely to undergo incorporation into organisms. Therefore, the comparison of inorganic concentrations detected in the weir, discharge plume, and background data is made using dissolved metals concentrations. Total metals data is also available, and are compared to the most relevant water quality criteria, which are DRBC criteria designed for dissolved metals. By comparing total metals concentrations to criteria designed for dissolved metals, the data are likely to indicate exceedances of water quality criteria due solely to suspended particulate containing metals. These data do not necessarily indicate a true exceedance of water quality criteria and are shown for

Table 2-2. Analyte list, methods, and detection limits for high-resolution PCB congener specific analyses for the Pedricktown North CDF study

Analyte	Method	Detection Limit
High Resolution PCBs		
Non-Ortho Coplanar Congeners		pg/L
77-Tetra	1668	25
81-Tetra	1668	25
126-Penta	1668	25
169-Hexa	1668	25
Mono- and Di-Ortho Congeners		ng/L (HRMS/LRMS)
8-Di	1668	1.25/25
18-Tri	1668	1.25/25
28-Tri	1668	1.25/25
37-Tri	1668	1.25/25
42-Tetra	1668	1.25/25
44-Tetra	1668	1.25/25
47-Tetra	1668	1.25/25
49-Tetra	1668	1.25/25
52-Tetra	1668	1.25/25
60-Tetra	1668	1.25/25
64-Tetra	1668	1.25/25
66-Tetra	1668	1.25/25
70-Tetra	1668	1.25/25
74-Tetra	1668	1.25/25
80-Tetra	1668	1.25/25
82-Penta	1668	1.25/25
84-Penta	1668	1.25/25
86-Penta	1668	1.25/25
87-Penta	1668	1.25/25
91-Penta	1668	1.25/25
92-Penta	1668	1.25/25
95-Penta	1668	1.25/25
97-Penta	1668	1.25/25
99-Penta	1668	1.25/25
101-Penta	1668	1.25/25
105-Penta	1668	1.25/25
110-Penta	1668	1.25/25
114-Penta	1668	1.25/25
118-Penta	1668	1.25/25
119-Penta	1668	1.25/25
120-Penta	1668	1.25/25
123-Penta	1668	1.25/25
127-Penta	1668	1.25/25

Table 2-2. Continued

Analyte	Method	Detection Limit
128-Hexa	1668	1.25/25
137-Hexa	1668	1.25/25
138-Hexa	1668	1.25/25
141-Hexa	1668	1.25/25
146-Hexa	1668	1.25/25
149-Hexa	1668	1.25/25
151-Hexa	1668	1.25/25
153-Hexa	1668	1.25/25
156-Hexa	1668	1.25/25
157-Hexa	1668	1.25/25
158-Hexa	1668	1.25/25
166-Hexa	1668	1.25/25
167-Hexa	1668	1.25/25
168-Hexa	1668	1.25/25
170-Hepta	1668	1.25/25
171-Hepta	1668	1.25/25
174-Hepta	1668	1.25/25
177-Hepta	1668	1.25/25
179-Hepta	1668	1.25/25
180-Hepta	1668	1.25/25
183-Hepta	1668	1.25/25
185-Hepta	1668	1.25/25
187-Hepta	1668	1.25/25
189-Hepta	1668	1.25/25
190-Hepta	1668	1.25/25
191-Hepta	1668	1.25/25
194-Octa	1668	1.25/25
195-Octa	1668	1.25/25
196-Octa	1668	1.25/25
198-Octa	1668	1.25/25
200-Octa	1668	1.25/25
201-Octa	1668	1.25/25
203-Octa	1668	1.25/25
205-Octa	1668	1.25/25
206-Nona	1668	1.25/25
207-Nona	1668	1.25/25
208-Nona	1668	1.25/25
209-Deca	1668	1.25/25

informational purposes. The DRBC water quality criteria are only appropriate for screening the dissolved inorganic concentrations.

2.3.2 *Pedricktown North Confined Disposal Facility Contaminant Loadings*

Total contaminant input was compared to the contaminant discharge at the weir to estimate the mass chemical loadings of the Pedricktown North CDF during the dredging operation. By combining the chemical analytical data with the total influent flow, as determined by dredging logs, we estimated the total amount of contaminants that was removed from the river channel and placed in the Pedricktown North CDF.

The total weir discharge was obtained by multiplying contaminant concentration data by the discharge flow, with non-detects assumed to be zero. The difference between the contaminants added to and released from the CDF was estimated to be the total contaminant loadings of the CDF. The ratio of discharge loading to the loading placed in the CDF presented the retention of the CDF. The retention of the CDF was used to determine what percentage of the contaminants is mobilized back into the river.

2.3.3 Daily Chemical Load Analysis

The daily chemical load analysis was conducted to determine if the CDF discharge had an impact (i.e., raised or lowered) the ambient water quality of the Delaware River. Rather than comparing instantaneous or composite chemical results to screening criteria, an evaluation of the changes in the daily chemical loading of the Delaware River provides a framework in which to evaluate the cumulative effect of dredging on water quality. Daily load analysis allows for the comparison of the CDF discharge to the ambient Delaware River water quality within the area that the disposal site is located, while accounting for the variable flow from the CDF. Only metal concentrations were used in this analysis as too few organics and PCBs were detected in the discharge to warrant further analysis. The daily load of metals in the weir discharge was determined using the procedures outlined in Section 2.3.2.

Ambient metals data were obtained from the USEPA (1999) and the DRBC Toxics Management Program (Fikslin 1999) and the background samples from this study. The DRBC data set was believed to be the most accurate estimate of ambient river concentrations, but only contained data for 4 analytes. The USEPA data set contains samples from this portion of the Delaware from the 1950s through 1998. A subset of these data was used to obtain the most relevant samples. The most recent samples collected between October and December were used because dredging is limited to late fall and winter months. The collection dates of the samples used for comparison were all autumn sampling events from 1985 and later, some analytes used data from 1990 and later. Mean concentrations of total and dissolved metals were used to represent ambient river concentrations. For those analytes that did not have suitable ambient river concentration estimates from the DRBC or USEPA estimates, background data collected at Penns Grove for this study were used. The mean concentration of each of the analytes was used to represent river concentrations. Assumed river concentrations were multiplied by a conservative estimate of river flow, 118.47 m^3/sec, taken from DRBC (1998) Table 12, which is the DRBC Zone 5 low flow. Low flow conditions are used for autumn because this is a period of less rainfall and lower flow than the rest of the year.

3. 0 RESULTS

All background, weir, and discharge plume data were compared to ecologically based DRBC water quality criteria. It should be noted that, while hardness dependant chronic criteria were based on the DRBC recommended hardness of 74 mg/L, hardness dependant acute water quality criteria were determined using discharge plume samples. Hardness was calculated from discharge plume data following ASTM Method 2340B, determined by the following calculation:

$$Hardness_{mg/L} = (2.497 * Calcium_{mg/L}) + (4118 * Magnesium_{mg/L})$$

The mean hardness of discharge plume samples was 377 mg/L. This result, while higher than might be anticipated, is indicative of autumn, low runoff conditions, during a particularly dry year. The hardness is influenced by salinity in this portion of the Delaware River, particularly during this time of year. For comparison, the USEPA data used for assessing cumulative river impacts (Section 3.3) were also evaluated for hardness. There were 129 samples for which there was hardness data between October and December of 1990 through 1998, and the mean hardness of these samples was 246.3 mg/L. This is consistent with the calculated mean discharge plume hardness used to evaluate acute water quality criteria.

3.1 WATER QUALITY ANALYSIS

3.1.1 Influent Samples

Influent contaminant concentrations are given for comparison purposes and are not compared to water quality criteria. They were used in determining loadings for the Pedricktown North CDF. These samples were analyzed as a slurry; both the water and sediment fractions of the samples were analyzed and the total concentration presented is the joint sum of the solid and aqueous fractions of the sample. They are not compared to water quality criteria because the contaminant concentrations represent both sediment and water concentrations and do not represent a discharge concentration to the waters of the Delaware River, which is the intended focus of water quality criteria.

Acetone appears as a detected analyte for three of the influent samples (Table 3-1), but this most likely is due to method error within the lab, since acetone is a common laboratory contaminant. The only other organic compounds detected in influent samples were DDT and its congeners (DDD and DDE; Table 3-1). The pesticides were irregularly present in samples and are likely to indicate localized areas of bulk sediment contamination. The influent samples possess typical inorganic element signatures for Delaware River sediments as determined in previous studies throughout the Delaware River (Burton and Bruce 1996 and 1998, Burton 1999). The concentrations of inorganics detected in inlet samples are less than or equal to those in prior sediment studies. Overall, contaminant concentrations were relatively consistent throughout the period of dredging.

The results of the other water quality analyses are presented below.

Table 3-1. Volatile organic compounds, pesticides, and metals concentrations in the slurry samples collected from the Pedricktown North CDF Influent

PARAMETERS	UNITS	DETECTION LIMIT	INLET 10/15/98	INLET 10/26/98	INLET 11/2/98	INLET 11/5/98
Volatile Organic Compounds						
Acetone	µg/L	10	37.24	115.5	ND	51.2
Bromoform	µg/L	19	ND	ND	ND	ND
Dibromochloromethane	µg/L	5	ND	ND	ND	ND
1,2-dichloroethane	µg/L	5	ND	ND	ND	ND
Pesticides						
4,4'DDE	µg/L	0.12	0.02856	ND	ND	ND
4,4'DDD	µg/L	0.12	0.2448	ND	8.319	ND
4,4'DDT	µg/L	0.12	0.02856	ND	ND	ND
Total Metals						
Aluminum	mg/L	0.007	663	625	577	567
Antimony	mg/L	0.019	ND	0.4	0.54	0.58
Arsenic	mg/L	0.01	ND	ND	0.013	ND
Barium	mg/L	0.001	3.54	1.82	1.72	6.18
Beryllium	mg/L	0.001	ND	0.043	0.037	0.029
Cadmium	mg/L	0.002	0.078	0.08	0.071	0.079
Calcium	mg/L	0.001	169	199	154	334
Chromium	mg/L	0.002	2.26	2.13	2.05	2
Cobalt	mg/L	0.006	0.778	0.801	0.713	0.844
Copper	mg/L	0.002	1.532	1.59	1.14	1.48
Cyanide	mg/L	0.01	ND	0.01	0.016	0.045
Iron	mg/L	0.005	127	1260	1140	1470
Lead	mg/L	0.001	2.79	3.35	2.66	2.24
Magnesium	mg/L	0.001	275	290	260	349
Manganese	mg/L	0.001	9.7	9.7	0.023	144
Mercury	mg/L	0.0002	0.0211	0.0237	0.0139	ND
Nickel	mg/L	0.002	1.77	1.71	0.009	1.73
Potassium	mg/L	0.051	8.52	85.2	76.5	111
Selenium	mg/L	0.001	0.0014	0.0018	0.0018	0.0033
Silver	mg/L	0.002	ND	0.058	0.052	0.063
Sodium	mg/L	0.1	83.3	56	131	352
Vanadium	mg/L	0.003	2.36	1.92	2.01	2.14
Zinc	mg/L	0.002	12.1	12.4	10.7	10.1

ND – Not Detected
NA – Not Analyzed

3.1.2 Water Quality Criteria

3.1.2.1 Weir Data

The Pedricktown North CDF discharge had generally good water quality, and had limited levels of metals that exceeded water quality criteria. There were two VOCs detected in weir samples, acetone and 1,2-Dichloroethane, that most likely result from lab error or possible cross-contamination in the lab or field. Acetone is a common laboratory contaminant, not present in concentrations significantly greater than the detection limit, and 1,2-Dichloroethane was reported at a level far below the method detection limit, therefore is unlikely to indicate true contamination on the discharge water (Table 3-2). In addition, 1,2,-Dichloroethane is very volatile in the environment, it rapidly evaporates from water and soil, and is unlikely to be present in such mobile and turbulent media as water flowing through a weir.

Two dissolved metals, aluminum and zinc, exceeded acute water quality criteria in one and two samples, respectively. Aluminum had a maximum detected concentration of 0.893 mg/L, which was slightly greater than the acute water quality criteria of 0.75 mg/L. Similarly, the concentration of zinc in the samples that exceeded the acute water quality criteria of 0.36 mg/L were 0.375 and 0.518 mg/L. A total of four inorganic elements were detected above chronic water quality criteria (Table 3-2). Dissolved aluminum and zinc exceeded chronic water quality criteria in all samples, dissolved cadmium exceeded chronic water quality criteria in two samples (0.004 and 0.005 mg/L compared to the chronic water quality criteria of 0.001 mg/L), and dissolved copper exceeded chronic water quality criteria in four samples (concentrations between 0.011 and 0.046 compared to a chronic water quality criteria of 0.01 mg/L).

Similar patterns exist in total metals concentrations, although comparisons to water quality criteria are shown for informational purposes only, as described in Section 2.3.1. Aluminum and zinc exceeded acute water quality criteria in 2 samples each. Comparing total metals concentrations to DRBC dissolved metals criteria, aluminum had concentrations of 0.885 and 0.91 mg/L compared to the acute water quality criteria of 0.75 mg/L and zinc had concentrations of 0.578 and 0.414 mg/L compared to 0.36 as the acute water quality criteria. Again, all aluminum and zinc concentrations exceeded chronic water quality criteria, and cadmium (0.004 to 0.005 mg/L) and copper (0.013 to 0.015 mg/L) exceeded their chronic water quality criteria (0.001 and 0.01 mg/L, respectively).

3.1.2.2 Discharge Plume Data

As with the background and weir samples, the discharge plume samples show limited levels of water quality criteria exceedance. Acetone was detected in three discharge plume samples at levels slightly higher than the detection limit. However, since acetone is a common laboratory contaminant, these results are believed to represent laboratory error. Dissolved aluminum, in one sample at a concentration of 1.68 mg/L, was the only dissolved inorganic to exceed acute water quality criteria (0.75 mg/L), although by less than a factor of two (Table 3-3). Four dissolved inorganics, aluminum, cadmium, copper, and zinc equaled or exceeded chronic water quality criteria in at least one discharge plume sample. Aluminum exceeded the chronic water quality criteria in five of

Table 3-2. Analytical results from Pedricktown North CDF weir samples. ***BOLD*** type indicates sample exceeds chronic water quality criteria, shaded cells indicate sample exceeds acute water quality criteria.

PARAMETERS	UNITS	DETECTION LIMIT	WEIR 10/29/98	WEIR 11/2/98	WEIR 11/5/98	WEIR 11/9/98	WEIR 11/12/98	WEIR 11/16/98	WEIR 11/19/98	WEIR 11/24/98	DRBC Water Quality Criteria Freshwater Acute	DRBC Water Quality Criteria Freshwater Chronic
Volatile Organic Compounds												
Acetone	µg/L	10	ND	ND	ND	ND	ND	12	11	11		
Bromoform	µg/L	19	ND	ND	ND	ND	ND	ND	ND	ND		
Dibromochloromethane	µg/L	5	ND	ND	ND	ND	ND	ND	ND	ND		
1,2-dichloroethane	µg/L	5	ND	ND	ND	ND	ND	ND	ND	0.32		
Pesticides												
4,4'DDE	µg/L	0.12	ND	ND	ND	ND	ND	ND	ND	ND	1.1 [a]	0.001 [a]
4,4'DDD	µg/L	0.12	ND	ND	ND	ND	ND	ND	ND	ND	1.1 [a]	0.001 [a]
4,4'DDT	µg/L	0.12	ND	ND	ND	ND	ND	ND	ND	ND	1.1 [a]	0.001 [a]
Dissolved Metals												
Aluminum	mg/L	0.007	***0.295***	***0.166***	***0.48***	***0.893***	***0.656***	***0.126***	***0.099***	***0.135***	0.75	0.087
Antimony	mg/L	0.019	ND	ND	ND	ND	ND	0.025	ND	ND		
Arsenic	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND	0.36	0.19
Barium	mg/L	0.001	0.024	0.045	0.096	0.133	0.101	0.084	0.082	0.075		
Beryllium	mg/L	0.001	ND	ND	ND	ND	ND	ND	ND	ND		
Cadmium	mg/L	0.002	***0.005***	ND	ND	ND	ND	***0.004***	ND	ND	0.02 [b]	0.001 [b]
Calcium	mg/L	0.001	140	147	117	114	115	117	113	134		
Chromium	mg/L	0.002	ND	ND	ND	ND	0.005	ND	ND	ND	0.016 [c]	0.011 [c]
Cobalt	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND		
Copper	mg/L	0.002	***0.018***	0.008	***0.035***	***0.011***	ND	0.003	***0.046***	0.007	0.06 [b]	0.01 [b]
Iron	mg/L	0.005	0.305	0.135	0.596	1.52	0.762	0.285	0.284	0.292		
Lead	mg/L	0.001	ND	ND	ND	ND	ND	ND	ND	ND	0.048	0.016
Magnesium	mg/L	0.001	69.5	91.2	79.3	77.8	77.9	84.4	83.4	95.1		
Manganese	mg/L	0.001	3.96	4.91	7.78	8.37	6.59	6.91	8.67	12.2		
Mercury	mg/L	0.0002	ND	ND	ND	ND	ND	ND	ND	ND	0.0024	0.000012
Nickel	mg/L	0.002	0.048	0.047	0.055	0.057	0.044	0.059	0.051	0.078	4.36 [b]	0.12 [b]
Potassium	mg/L	0.051	12.5	16.5	15.3	14	17.3	17.5	18	17.7		
Selenium	mg/L	0.001	ND	ND	ND	ND	ND	ND	ND	ND	0.02	0.005
Silver	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND	0.04 [b]	
Sodium	mg/L	0.1	286	379	344	418	423	232	242	242		
Vanadium	mg/L	0.003	0.007	ND	ND	ND	ND	ND	ND	ND		
Zinc	mg/L	0.002	***0.548***	***0.375***	***0.251***	***0.194***	***0.263***	***0.248***	***0.203***	***0.333***	0.36 [b]	0.08 [b]

Table 3-2. Continued

PARAMETERS	UNITS	DETECTION LIMIT	WEIR 10/29/98	WEIR 11/2/98	WEIR 11/5/98	WEIR 11/9/98	WEIR 11/12/98	WEIR 11/16/98	WEIR 11/19/98	WEIR 11/24/98	DRBC Water Quality Criteria Freshwater Acute	DRBC Water Quality Criteria Freshwater Chronic
Total Metals												
Aluminum	mg/L	0.007	***0.75***	***0.738***	0.885	0.91	***0.74***	***0.38***	***0.214***	***0.288***	0.75	0.087
Antimony	mg/L	0.019	ND	ND	ND	ND	ND	ND	ND	ND		
Arsenic	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	ND	0.36	0.19
Barium	mg/L	0.001	0.036	0.049	0.102	0.143	0.105	0.092	0.084	0.075		
Beryllium	mg/L	0.001	ND	ND	ND	ND	ND	ND	ND	ND		
Cadmium	mg/L	0.002	***0.004***	ND	ND	ND	ND	***0.004***	***0.004***	***0.005***	0.02 [b]	0.001 [b]
Calcium	mg/L	0.001	175	139	111	117	115	111	118	137		
Chromium	mg/L	0.002	0.003	ND	ND	ND	ND	ND	0.01	ND	0.016 [c]	0.011 [c]
Cobalt	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND	ND		
Copper	mg/L	0.002	***0.013***	***0.015***	ND	ND	ND	ND	ND	ND	0.06 [b]	0.01 [b]
Cyanide	mg/L	0.01	NA	ND	ND	ND	ND	ND	ND	ND	0.022	0.0052
Iron	mg/L	0.005	0.638	0.776	1.34	1.67	1.13	0.84	0.656	0.727		
Lead	mg/L	0.001	ND	ND	ND	ND	ND	ND	ND	ND	0.048	0.016
Magnesium	mg/L	0.001	104	86.4	75	80.1	79.1	80.8	86.7	97.1		
Manganese	mg/L	0.001	5.66	4.86	8.08	9.1	6.76	7.44	8.67	11.5		
Mercury	mg/L	0.0002	ND	ND	ND	ND	ND	ND	ND	ND	0.0024	0.000012
Nickel	mg/L	0.002	0.063	0.051	0.056	0.054	0.056	0.056	0.062	0.071	4.36 [b]	0.12 [b]
Potassium	mg/L	0.051	19.4	15.7	15.4	15.1	17.3	19.9	17	15.5		
Selenium	mg/L	0.001	ND	ND	ND	0.0012	0.002	ND	ND	ND	0.02	0.005
Silver	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	ND	0.04 [b]	
Sodium	mg/L	0.1	330	678	440	462	361	222	208	227		
Vanadium	mg/L	0.003	ND	ND	ND	ND	ND	ND	ND	ND		
Zinc	mg/L	0.002	0.578	0.414	***0.257***	***0.192***	***0.267***	***0.264***	***0.216***	***0.349***	0.36 [b]	0.08 [b]

ND - Not Detected

NA - Not Analyzed

[a] DRBC DDT standards are for total DDT, not individual metabolites. The sum total of all metabolites is the appropriate value to compare to these screening levels.

[b] DRBC water quality standards for these analytes are hardness dependent. Chronic water quality criteria are based on the DRBC guideline of 74 mg/l. Average hardness of mixing zone samples (377 mg/l) was used to determine acute criteria.

[c] The lower of the DRBC water quality standards for Chromium III, which is hardness dependant, and Chromium VI were used – Chromium VI was lower under these conditions.

Table 3-3. Analytical results from Pedricktown North CDF discharge plume samples. ***BOLD*** type indicates sample exceeds chronic water quality criteria, shaded cells indicate sample exceeds acute water quality criteria.

PARAMETERS	UNITS	DETECTION LIMIT	MIX 10/29/98	MIX 11/2/98	MIX 11/5/98	MIX 11/9/98	MIX 11/12/98	MIX 11/16/98	MIX 11/19/98	DRBC Water Quality Criteria Freshwater Acute	DRBC Water Quality Criteria Freshwater Chronic
Volatile Organic Compounds											
Acetone	µg/L	10	ND	ND	13	ND	18	14	14		
Bromoform	µg/L	19	ND	ND	ND	ND	ND	ND	ND		
Dibromochloromethane	µg/L	5	ND	ND	ND	ND	ND	ND	ND		
1,2-dichloroethane	µg/L	5	ND	ND	ND	ND	ND	ND	ND		
Pesticides											
4,4'DDE	µg/L	0.12	ND	ND	ND	ND	ND	ND	ND	0.55	0.001
4,4'DDD	µg/L	0.12	ND	ND	ND	ND	ND	ND	ND	0.55	0.001
4,4'DDT	µg/L	0.12	ND	ND	ND	ND	ND	ND	ND	0.55	0.001
Dissolved Metals											
Aluminum	mg/L	0.007	***0.613***	***0.488***	***0.314***	***0.273***	[illegible]	0.051	***0.096***	0.75	0.087
Antimony	mg/L	0.019	ND	ND	ND	ND	ND	ND	ND		
Arsenic	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	0.36	0.19
Barium	mg/L	0.001	0.042	0.044	0.044	0.032	0.067	0.032	0.034		
Beryllium	mg/L	0.001	ND	ND	ND	ND	ND	ND	ND		
Cadmium	mg/L	0.002	***0.003***	ND	ND	ND	ND	ND	ND	0.02 [b]	0.001 [b]
Calcium	mg/L	0.001	37.6	82	58.4	44.7	175	44	44.7		
Chromium	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	0.016 [c]	0.011 [c]
Cobalt	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND		
Copper	mg/L	0.002	***0.014***	***0.04***	0.004	***0.011***	***0.046***	ND	ND	0.06 [c]	0.01
Iron	mg/L	0.005	2.6	0.493	0.344	0.282	2.38	0.058	0.06		
Lead	mg/L	0.001	0.001	ND	ND	ND	ND	ND	ND	0.048	0.016
Magnesium	mg/L	0.001	43.1	66.5	55.1	64.5	69.5	64.7	73.1		
Manganese	mg/L	0.001	0.39	2.61	1.68	0.042	3.21	0.181	ND		
Mercury	mg/L	0.0002	ND	ND	ND	ND	ND	ND	ND	0.0024	0.000012
Nickel	mg/L	0.002	0.006	0.024	0.013	0.0005	0.03	ND	0.044	4.36 [b]	0.12 [b]
Potassium	mg/L	0.051	13.8	15.3	14.5	19.2	19.4	18	20.6		
Selenium	mg/L	0.001	ND	0.0012	0.0012	0.0014	0.0012	0.0016	0.0017	0.02	0.005
Silver	mg/L	0.002	ND	ND	ND	ND	ND	ND	ND	0.04 [b]	
Sodium	mg/L	0.1	445	370	449	678	454	500	581		
Vanadium	mg/L	0.003	ND	ND	ND	ND	ND	ND	ND		
Zinc	mg/L	0.002	***0.087***	***0.187***	0.064	0.015	***0.135***	0.018	0.009	0.36 [b]	0.08 [b]

Table 3-3. Continued

PARAMETERS	UNITS	DETECTION LIMIT	MIX 10/29/98	MIX 11/2/98	MIX 11/5/98	MIX 11/9/98	MIX 11/12/98	MIX 11/16/98	MIX 11/19/98	DRBC Water Quality Criteria Freshwater Acute		DRBC Water Quality Criteria Freshwater Chronic	
Total Metals													
Aluminum	mg/L	0.007	9.24	0.982	1.22	1.19	1.61	***0.446***	***0.471***	0.75		0.087	
Antimony	mg/L	0.019	ND	ND	ND	ND	ND	0.033	0.026				
Arsenic	mg/L	0.01	ND	ND	ND	ND	ND	ND	ND	0.36		0.19	
Barium	mg/L	0.001	0.083	0.047	0.055	0.041	0.086	0.034	0.032				
Beryllium	mg/L	0.001	ND	ND	ND	ND	ND	ND	ND				
Cadmium	mg/L	0.002	***0.007***	ND	ND	ND	ND	***0.004***	***0.003***	0.02	b	0.001	b
Calcium	mg/L	0.001	40.9	80.6	60	45.3	99.3	44.5	45.3				
Chromium	mg/L	0.002	0.012	ND	ND	ND	ND	ND	ND	0.016	c	0.011	c
Cobalt	mg/L	0.006	ND	ND	ND	ND	ND	ND	ND				
Copper	mg/L	0.002	0.01	ND	***0.012***	ND	ND	ND	ND	0.06	b	0.01	b
Cyanide	mg/L	0.01	NA	***0.017***	ND	ND	ND	ND	ND	0.022		0.0052	
Iron	mg/L	0.005	12.6	1.24	2.78	1.36	2.6	0.779	0.721				
Lead	mg/L	0.001	0.003	ND	ND	ND	ND	ND	ND	0.048		0.016	
Magnesium	mg/L	0.001	47.7	65.7	53.6	65.4	73.9	65.1	73.9				
Manganese	mg/L	0.001	0.762	2.68	2.67	0.084	5.16	0.22	ND				
Mercury	mg/L	0.0002	ND	ND	ND	ND	ND	ND	ND	0.0021		0.000012	
Nickel	mg/L	0.002	0.019	0.026	0.027	0.008	0.037	ND	ND	4.36	b	0.12	b
Potassium	mg/L	0.051	15	16	14.1	20.2	21.4	16.8	18				
Selenium	mg/L	0.001	0.0014	ND	0.0013	0.0023	0.0016	0.0015	0.0033	0.02		0.005	
Silver	mg/L	0.002	0.004	ND	ND	0.004	ND	0.006	0.006	0.04	b		
Sodium	mg/L	0.1	502	440	458	700	405	486	568				
Vanadium	mg/L	0.003	0.023	ND	ND	0.005	ND	ND	ND				
Zinc	mg/L	0.002	***0.142***	***0.176***	***0.137***	0.018	***0.209***	0.018	0.008	0.36	b	0.08	b

ND - Not Detected

NA - Not Analyzed

[a] DRBC DDT standards are for total DDT, not individual metabolites. The sum total of all metabolites is the appropriate value to compare to these screening levels.

[b] DRBC water quality standards for these analytes are hardness dependent. Chronic water quality criteria are based on the DRBC guideline of 74 mg/l. Average hardness of mixing zone samples (377 mg/l) was used to determine acute criteria.

[c] The lower of the DRBC water quality standards for Chromium III, which is hardness dependant, and Chromium VI were used – Chromium VI was lower under these conditions.

the six remaining samples. The dissolved cadmium concentration in one sample was greater than the chronic water quality criteria of 0.001 mg/L. Copper exceeded the chronic water quality criteria of 0.01 mg/L in four samples, with concentrations of 0.011 to 0.046 mg/L and zinc exceeded its chronic water quality criteria of 0.08 mg/L in three samples with concentrations ranging from 0.087 to 0.187 mg/L.

The total concentration of two inorganic elements, aluminum and chromium, exceeded the DRBC acute water quality criteria in at least one discharge plume sample, but comparisons of total inorganic concentrations are given for informational purposes only, as discussed in Section 2.3.1. Total aluminum exceeded the acute water quality criteria in five samples with the concentrations of four samples between 0.982 and 1.6 mg/L compared to the water quality criteria of 0.75 mg/L. One sample had a total concentration of 9.24 mg/L. Chromium slightly exceeded the acute water quality criteria (0.016 mg/L) in one sample, with a concentration of 0.017 mg/L. Four other metals exceeded chronic water quality criteria in at least one sample. Cadmium exceeded its chronic water quality criteria (0.001 mg/L) in 3 samples (0.002 to 0.007 mg/L). Zinc exceeded its chronic water quality criteria (0.08 mg/L) in 4 samples (0.137 to 0.209 mg/L). One sample each of copper (0.012 mg/L) and cyanide (0.017 mg/L) exceeded their chronic water quality criteria of 0.01 and 0.0052 mg/L, respectively.

3.1.2.3 Background Data

Background samples indicate water quality in the river during the dredging operation was below water quality criteria for discharge to the river, but that limited, low levels of metals contamination exists within the river. Two VOCs were detected in a background sample (bromoform and dibromochloromethane), but are believed to represent laboratory error rather than true VOC contamination in the river (Table 3-4). Aluminum was the only dissolved inorganic that exceeded its acute water quality criteria, at just over two times greater the 0.75 mg/L criteria. Three dissolved inorganics had concentrations exceeding chronic water quality criteria in at least one sample, aluminum, cadmium, and copper. Aluminum in one other sample was detected at a concentration of 0.139 mg/L as compared to its chronic water quality criteria of 0.087 mg/L. Cadmium was detected at concentrations of 0.004 and 0.005 mg/L, compared to its chronic water quality criteria of 0.001 mg/L, and copper was detected in one sample at 0.014 mg/L compared to its chronic water quality criteria of 0.01 mg/L.

Only two inorganics, aluminum and cadmium, had total concentrations that exceeded acute water quality criteria, although the cadmium detected just exceeded its acute water quality criteria (Table 3-4). Additional samples of aluminum and cadmium exceeded their chronic water quality criteria, as did one sample of chromium, selenium, and zinc and three copper concentrations. Other than aluminum, the concentrations were very close to the chronic water quality criteria. These included cadmium at 0.004 mg/L (criteria = 0.001 mg/L); chromium at 0.016 mg/L (criteria = 0.011 mg/L); copper between 0.01 and 0.046 mg/L (criteria = 0.01 mg/L); selenium at 0.0072 mg/L (criteria = 0.005 mg/L); and zinc at 0.094 mg/L (criteria = 0.08 mg/L). The aluminum concentrations ranged from 0.217 to 0.425 mg/L, compared to chronic water quality criteria of 0.087 mg/L.

Table 3-4. Analytical results from Pedricktown North CDF background samples. ***BOLD*** type indicates sample exceeds chronic water quality criteria, shaded cells indicate sample exceeds acute water quality criteria.

PARAMETERS	UNITS	DETECTION LIMIT	BG 10/29/98	BG 11/12/98	BG 11/16/98	BG 11/19/98	DRBC Water Quality Criteria Freshwater Acute	DRBC Water Quality Criteria Freshwater Chronic
Volatile Organic Compounds								
Acetone	µg/L	10	ND	ND	ND	ND		
Bromoform	µg/L	19	ND	ND	ND	1.3		
Dibromochloromethane	µg/L	5	ND	ND	ND	0.34		
1,2-dichloroethane	µg/L	5	ND	ND	ND	ND		
Pesticides								
4,4'DDE	µg/L	0.12	ND	ND	ND	ND	1.1 [a]	0.001 [a]
4,4'DDD	µg/L	0.12	ND	ND	ND	ND	1.1 [a]	0.001 [a]
4,4'DDT	µg/L	0.12	ND	ND	ND	ND	1.1 [a]	0.001 [a]
Dissolved Metals								
Aluminum	mg/L	0.007	1.78	***0.139***	0.057	0.084	0.75	0.087
Antimony	mg/L	0.019	ND	ND	ND	ND		
Arsenic	mg/L	0.01	ND	ND	ND	ND	0.36	0.19
Barium	mg/L	0.001	0.041	0.031	0.033	0.038		
Beryllium	mg/L	0.001	ND	ND	ND	ND		
Cadmium	mg/L	0.002	***0.015***	ND	ND	***0.004***	0.02 [b]	0.001 [b]
Calcium	mg/L	0.001	45.4	50.8	53.1	56.1		
Chromium	mg/L	0.002	ND	ND	ND	0.009	0.016 [c]	0.011 [c]
Cobalt	mg/L	0.006	ND	ND	ND	ND		
Copper	mg/L	0.002	***0.014***	0.007	ND	ND	0.06 [b]	0.01 [b]
Iron	mg/L	0.005	2.05	0.126	0.027	0.034		
Lead	mg/L	0.001	0.003	ND	ND	ND	0.048	0.016
Magnesium	mg/L	0.001	71.3	87.1	101	114		
Manganese	mg/L	0.001	ND	ND	ND	ND		
Mercury	mg/L	0.0002	ND	ND	ND	ND	0.0024	0.000012
Nickel	mg/L	0.002	0.006	0.006	ND	0.007	4.36 [b]	0.12 [b]
Potassium	mg/L	0.051	21.6	24.9	28.5	31		
Selenium	mg/L	0.001	0.0014	0.004	0.0029	0.003	0.02	0.005
Silver	mg/L	0.002	ND	ND	ND	0.009	0.04 [b]	
Sodium	mg/L	0.1	661	890	89	961		
Vanadium	mg/L	0.003	ND	ND	ND	ND		
Zinc	mg/L	0.002	0.026	0.021	0.012	0.006	0.36 [b]	0.08 [b]
Total Metals								
Aluminum	mg/L	0.007	***0.217***	8.57	***0.425***	***0.34***	0.75	0.087
Antimony	mg/L	0.019	ND	ND	ND	0.041		
Arsenic	mg/L	0.01	ND	ND	ND	ND	0.36	0.19
Barium	mg/L	0.001	0.033	0.078	0.042	0.039		
Beryllium	mg/L	0.001	ND	ND	ND	ND		
Cadmium	mg/L	0.002	0.024	ND	ND	***0.004***	0.02 [b]	0.001 [b]

Table 3-4. Continued

PARAMETERS	UNITS	DETECTION LIMIT	BG 10/29/98	BG 11/12/98	BG 11/16/98	BG 11/19/98	DRBC Water Quality Criteria Freshwater Acute	DRBC Water Quality Criteria Freshwater Chronic
Calcium	mg/L	0.001	44.4	91.3	51.3	54.4		
Chromium	mg/L	0.002	ND	***0.016***	ND	ND	0.016 [c]	0.011 [c]
Cobalt	mg/L	0.006	ND	ND	ND	ND		
Copper	mg/L	0.002	ND	***0.018***	***0.046***	***0.011***	0.06 [b]	0.01 [b]
Cyanide	mg/L	0.01	NA	ND	ND	ND	0.022	0.0052
Iron	mg/L	0.005	0.611	12.5	0.596	0.485		
Lead	mg/L	0.001	0.002	ND	ND	ND	0.048	0.016
Magnesium	mg/L	0.001	47.4	91.3	99.2	110		
Manganese	mg/L	0.001	ND	0.476	ND	ND		
Mercury	mg/L	0.0002	ND	ND	ND	ND	0.0024	0.000012
Nickel	mg/L	0.002	0.003	0.018	ND	ND	4.36 [b]	0.12 [b]
Potassium	mg/L	0.051	21.6	27.7	27.7	27.8		
Selenium	mg/L	0.001	0.0033	***0.0072***	0.0033	0.0043	0.02	0.005
Silver	mg/L	0.002	0.011	ND	ND	ND	0.04 [b]	
Sodium	mg/L	0.1	621	867	793	913		
Vanadium	mg/L	0.003	ND	0.028	ND	ND		
Zinc	mg/L	0.002	0.046	***0.094***	0.008	0.005	0.36 [b]	0.08 [b]

ND - Not Detected
NA - Not Analyzed
[a] DRBC DDT standards are for total DDT, not individual metabolites. The sum total of all metabolites is the appropriate value to compare to these screening levels.
[b] DRBC water quality standards for these analytes are hardness dependent. Chronic water quality criteria are based on the DRBC guideline of 74 mg/l. Average hardness of mixing zone samples (377 mg/l) was used to determine acute criteria.
[c] The lower of the DRBC water quality standards for Chromium III, which is hardness dependant, and Chromium VI were used – Chromium VI was lower under these conditions.

3.1.2.4 Comparison of Sample Areas

While the comparison of each group of data to applicable water quality criteria is critical to understanding the potential impacts of the Pedricktown North CDF discharge on the Delaware River, the relationship of the different sample areas provides a relative framework in which to view the contaminant concentrations. For ease of comparison, Figures 3-1 through 3-6 depict graphical representations of the data discussed throughout the above sections, the first three show dissolved metals concentrations, and the latter three show total. The height of each column in the graphs represents the mean concentration of the analyte per data grouping (i.e., weir, discharge plume, and background), and the bars represent the standard deviation of the data. Because the inorganics are present at very different levels, and the relative concentrations of the various inorganics have no relationship to other analytes, the graphs were grouped by

level of detections. This grouping of the data provides the most obvious visual analysis, but bears no meaning beyond that.

Of the dissolved metals, aluminum (Figure 3-1) exceeded the acute water quality criteria the most frequently, once in each of the data groupings. However, we can see from the figure that the mean aluminum concentration did not exceed the acute water quality criteria, and the three groupings (weir, discharge plume, and background) do not have different concentrations relative to each other. Comparatively, zinc (Figure 3-2) appears to have higher concentrations in the weir than other data groupings, and the weir mean is just less than the acute water quality criteria. No other dissolved metals that exceeded criteria show a pattern of higher concentrations in the weir, and many of the trace metals (Figure 3-3) appear to occur more frequently in background samples.

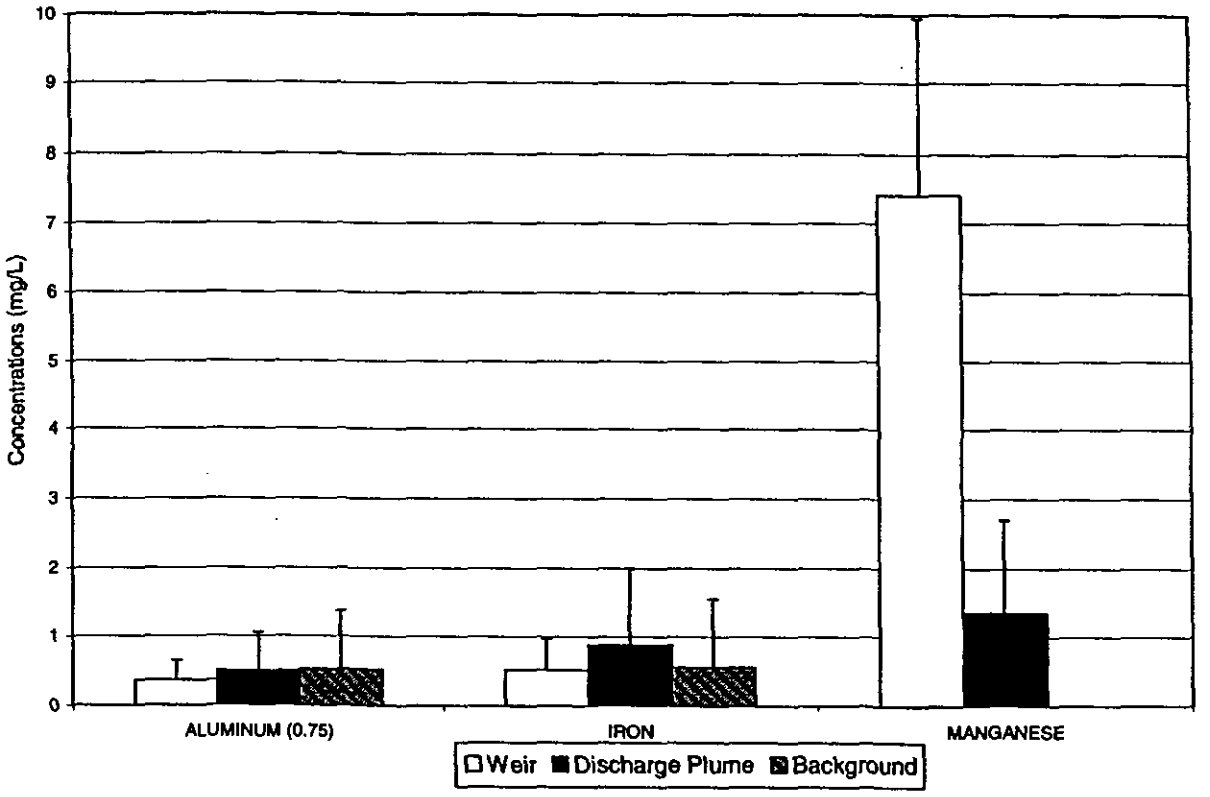

Figure 3-1. Dissolved metals concentrations in the Pedricktown CDF weir, discharge plume, and background samples for analytes with mean concentrations typically between 1 and 10 mg/L. Standard deviation is shown by the error bars, the DRBC acute water quality criteria is in brackets next to the analyte name.

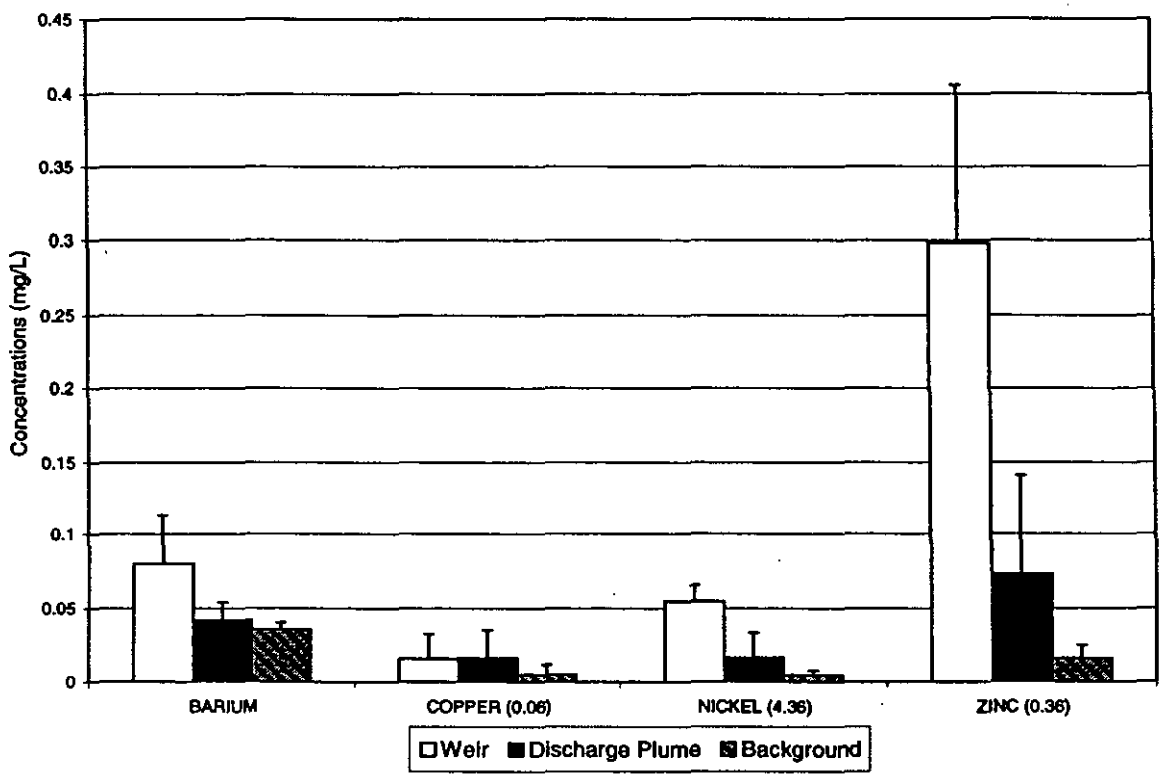

Figure 3-2. Dissolved metals concentrations in the Pedricktown CDF weir, discharge plume, and background samples for analytes with mean concentrations typically between 0.01 and 0.45 mg/L. Standard deviation is shown by the error bars, the DRBC acute water quality criteria is in brackets next to the analyte name.

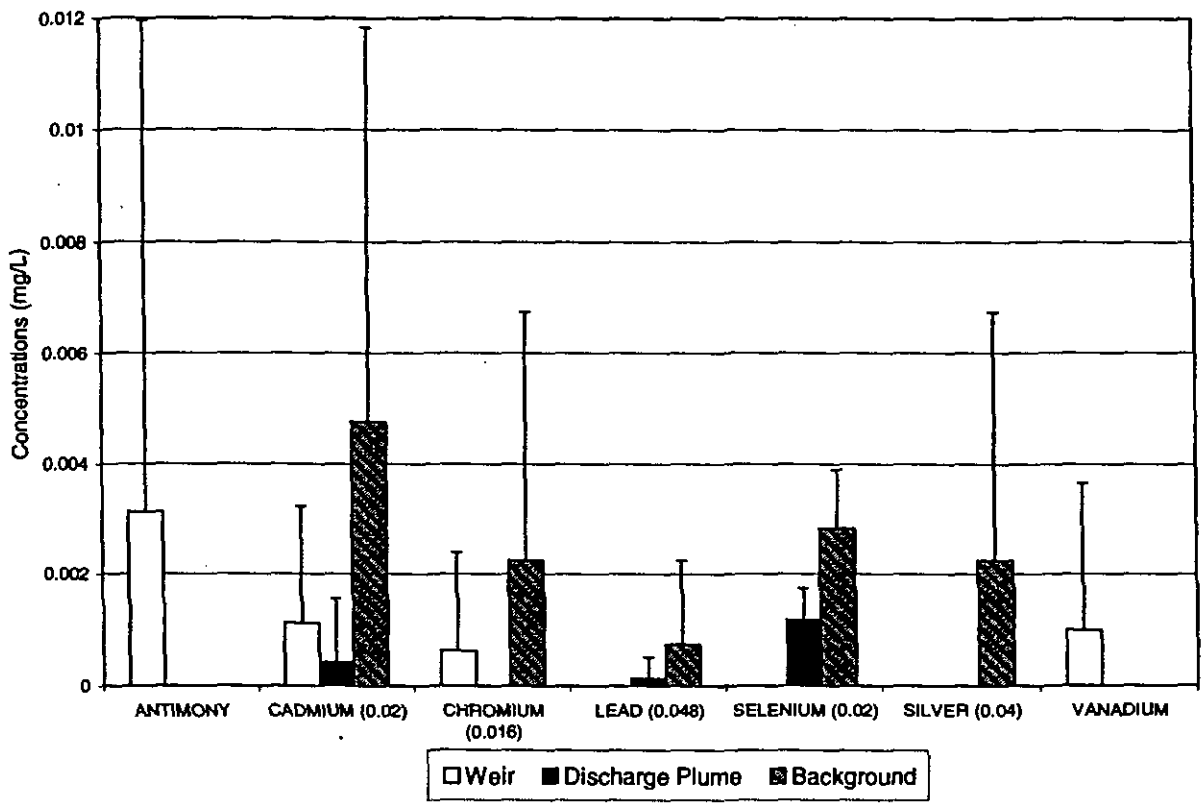

Figure 3-3. Dissolved metals concentrations in the Pedricktown CDF weir, discharge plume, and background samples for analytes with mean concentrations typically between 0.001 and 0.012 mg/L. Standard deviation is shown by the error bars, the DRBC acute water quality criteria is in brackets next to the analyte name.

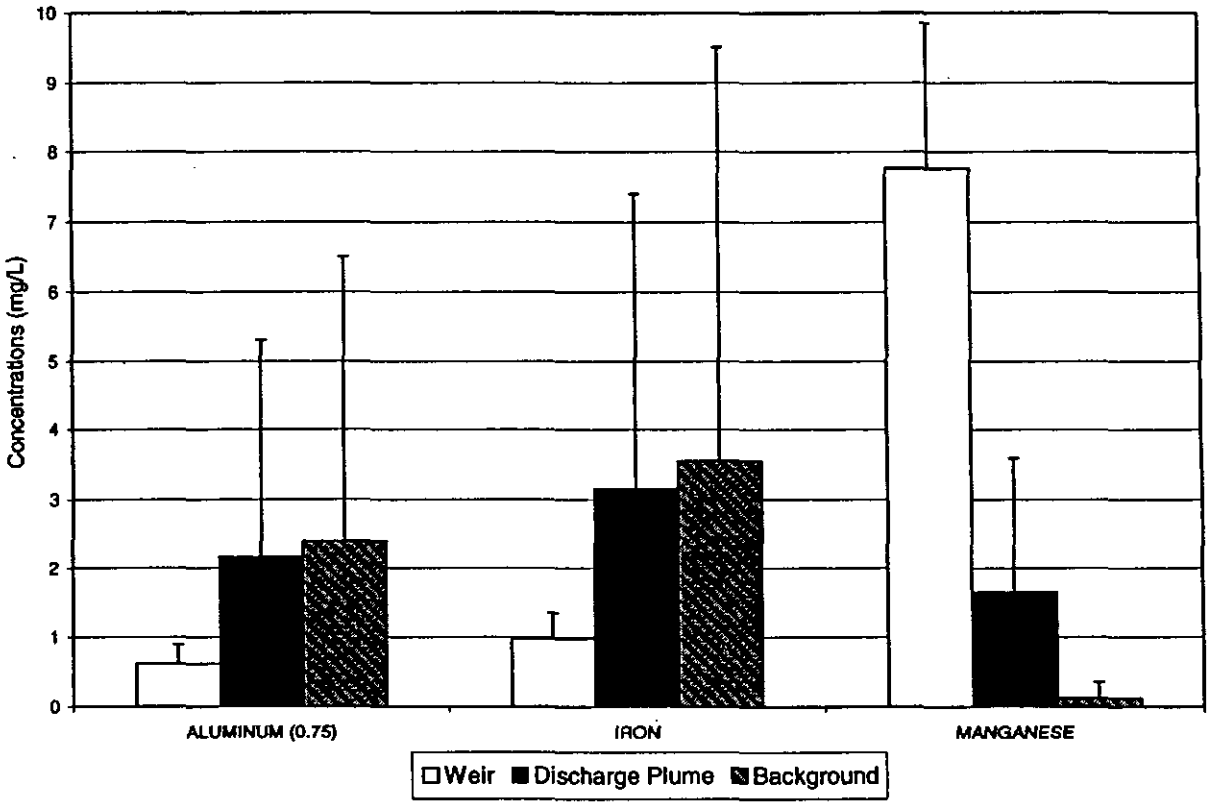

Figure 3-4. Total metals concentrations in the Pedricktown CDF weir, discharge plume, and background samples for analytes with mean concentrations typically between 1 and 10 mg/L. Standard deviation is shown by the error bars, the DRBC acute water quality criteria is in brackets next to the analyte name.

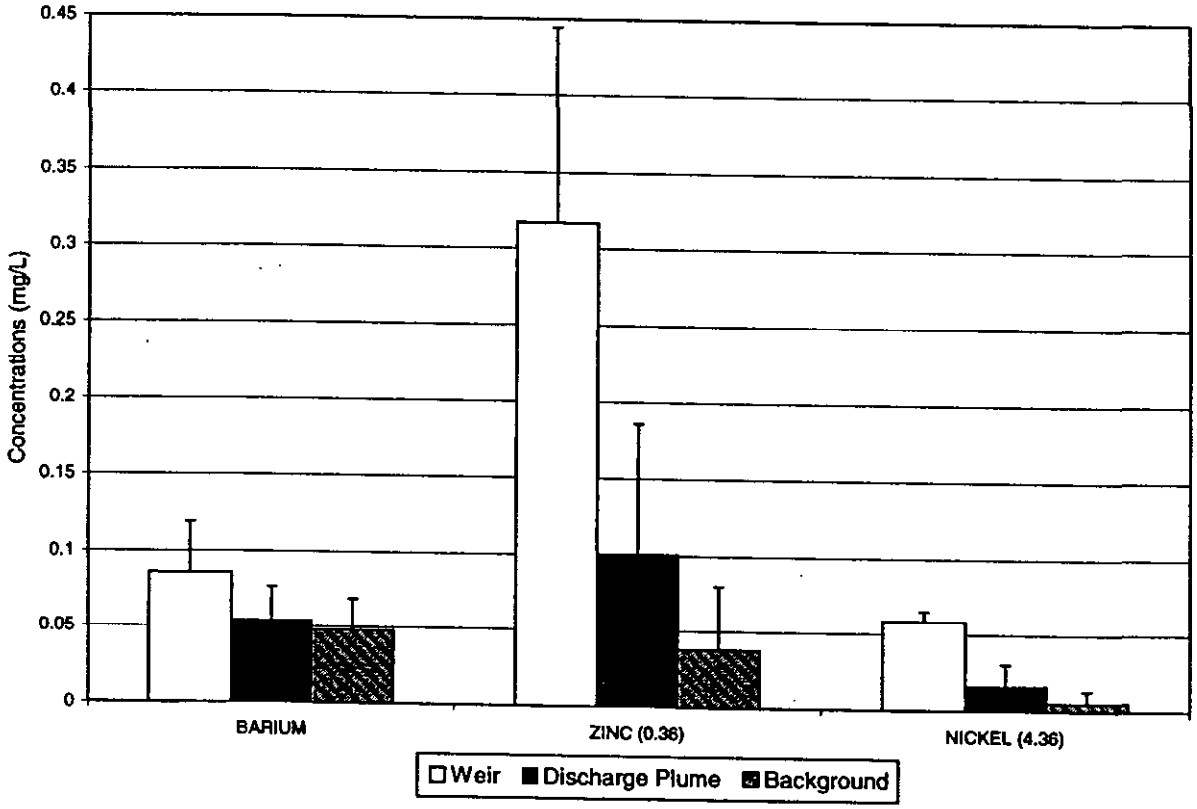

Figure 3-5. Total metals concentrations in the Pedricktown CDF weir, discharge plume, and background samples for analytes with mean concentrations typically between 0.05 and 0.5 mg/L. Standard deviation is shown by the error bars, the DRBC acute water quality criteria is in brackets next to the analyte name.

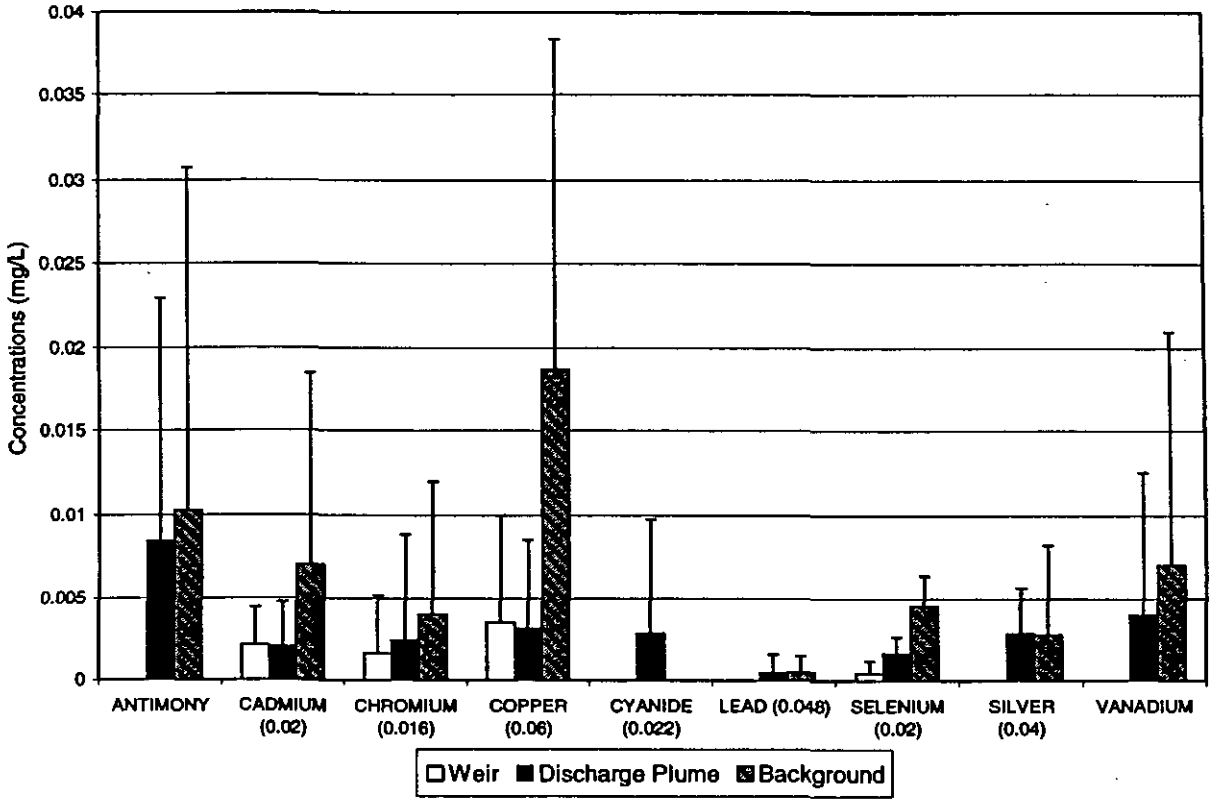

Figure 3-6. Total metals concentrations in the Pedricktown CDF weir, discharge plume, and background samples for analytes with mean concentrations typically between 0.001 and 0.05 mg/L. Standard deviation is shown by the error bars, the DRBC acute water quality criteria is in brackets next to the analyte name.

3.1.3 Total Suspended Solids

The TSS measured from the weir was extremely low indicating that the site efficiently removed suspended solids before discharging into the Delaware River. Weir TSS ranged from 8 to 29 mg/L throughout the study (Figure 3-7). These amounts are below any of the regulatory guidelines presented by the DRBC for various types of effluents.

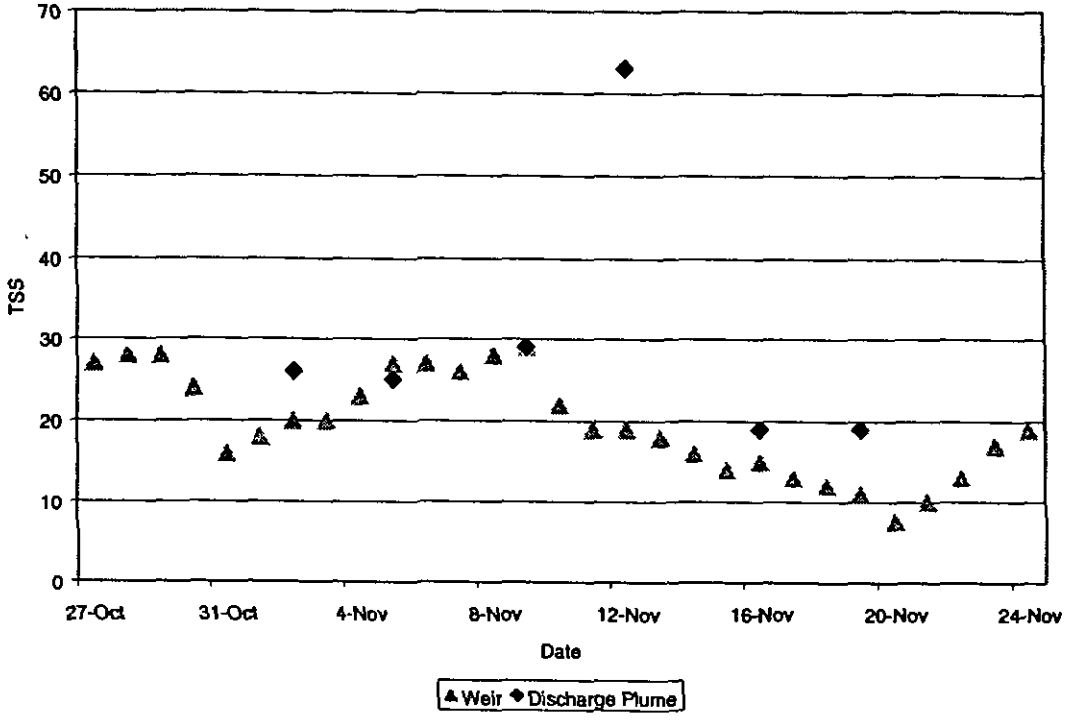

Figure 3-7. Total suspended solids data from the weir and discharge plume samples

The discharge plume TSS at slack tide ranged from 19 to 26 mg/L (Figure 3-7), other than one, unusually high TSS (760 mg/L) that was collected during a period of high wind, which may have affected the validity of the sample. Background TSS was sampled twice, but one of the samples (350 mg/L) may have experienced similar interference from high wind conditions in the field. The other sample, 46 mg/L is similar to the discharge plume data. The influent samples indicate the high level of suspended material anticipated with dredge slurry.

Table 3-5. Total Suspended Solids in inlet and background samples collected for the Pedricktown CDF study.

Sample ID	Date	mg/L
INLET	10/26/98	32,182
INLET	11/2/98	16,936
INLET	11/5/98	122,405
BG	10/29/98	46
BG	11/12/98	350

3.1.4 Polychlorinated Biphenyls

Mono- and di-ortho PCB congeners were not detected in weir (using HRGC/HRMS), background, or discharge plume (using HRGC/LRMS) samples (Tables 3-6 and 3-7). Out of 77 possible mono- and di-ortho congeners, 15 were not detected in any influent samples. The remaining 62 were detected in at least one sample each, at levels ranging from 5.4 to 528 ng/L (Table 3-7). Total concentrations of mono- and di-ortho PCB congeners in the Inlet samples ranged from 1204 ng/L to 4218 ng/L.

Low levels of the four non-ortho coplanar PCB congeners were detected in background, weir, and discharge plume locations (Table 3-6). Higher levels associated with the slurry were found in the influent samples. The data, however, have high levels of uncertainty due to laboratory method error. The laboratory report shows detections of non-ortho coplanar PCBs in the method blanks at levels similar to those found in background, weir, and discharge plume samples (Appendix C). USEPA guidance for data usability (USEPA 1994a,b) proscribes that organic compounds detected in site samples at levels less than five times greater than levels detected in method blanks should not be considered detections. Congener 81-TCB was detected in method blanks at levels of 9.6 and 11.3 pg/L, and congener 77-TCB was detected at 19 and 17.6 pg/L. Therefore, if this PCB analysis followed USEPA guidance, levels of 81-TCB below 56.5 pg/L and levels of 77-TCB below 95 pg/L would be considered non-detects, which would include all samples in which these compounds are reported on Tables 3-6 and 3-7. While this guidance was not followed for purposes of this report, it is necessary to critically consider the presence and quantification of non-ortho coplanar PCBs at such low levels.

By comparing the PCB data obtained from this study to the in-depth sediment analysis conducted by Burton (1997), we can draw several conclusions regarding the mobility and toxicity of the PCBs in the Pedricktown North CDF influent and discharge. Sediments in the Marcus Hook reach of the Delaware River navigational channel were recently analyzed using high resolution techniques (Burton 1997). These sediments were found to have the highest concentrations of PCBs in the navigational channel and similar PCB concentrations are exhibited in our influent data. For example, the ranges of the sum of congeners for the dry-weight sediment fraction of the slurry ranged between 49.3 and 70.3 ng/g while the Marcus Hook sediment ranged between 40 and 74 ng/g (Station DRV-6, Burton 1997). In addition, the sediments within the navigational channel were found to have PCB concentrations an order of magnitude lower than the sediments in the shoals of the Delaware.

Burton (1997) estimated the concentration of PCBs in sediment pore water based on a conservative estimate of PCB solubility and the frequency of PCB congeners in the Marcus Hook sediments. This solubility-based estimate was designed to evaluate potential PCB mobilization from hopper dredge overflow. The study extrapolated from the pore water concentrations to determine the concentration of PCBs in the water portion of dredge slurry. This level, found to be 0.0013 µg/L, was shown to be an order of magnitude lower than the human health-based DRBC water quality criteria for PCBs in freshwater. This study quantitatively evaluated concentrations of PCB congeners to lower levels than were achieved in the 1997 study. In fact, the concentrations of PCBs in water

determined through calculations were higher than detected PCB concentrations in the inlet samples.

These findings indicate that dredging within the area of highest known PCB concentrations of the Delaware River navigational channel does not result in PCB concentrations in water that exceed DRBC water quality criteria or present potential human-health risks. In addition, the management of dredge material within the Pedricktown North CDF resulted in substantially lower concentrations of PCBs in weir discharge than inlet samples. Inlet samples had total sums of congeners greater than 1,000 ng/L in all samples, and weir samples had total sums of congeners below 101 pg/L in all samples (0.1 ng/L), representing concentrations of PCBs four orders of magnitude (10,000 times) less than the inlet samples. Thus, the PCB concentrations of the weir discharge are much lower than the DRBC risk-based guidance requires.

3.2 PEDRICKTOWN CONFINED DISPOSAL FACILITY CONTAMINANT LOADINGS

Total contaminant loadings of the Pedricktown CDF were determined by subtracting the total amount of metals and PCBs that were discharged from the weir from the total amount placed in the site. Total inputs were determined by multiplying the contaminant concentrations within dredge slurry by the amount of slurry pumped into the site. The four influent samples were considered to be representative of the material placed in the site for a period of time before and after the sample (i.e., the duration of dredging was divided into four periods, each of which was represented by one influent sample). Total weir discharge amounts were based on the concentrations of the weir samples multiplied by the discharge flow for the applicable time period for the weir sample. Samples were collected from the weir at three or four day intervals (twice per week). The water discharged during the interval between sample collection dates was represented chemically in the following sample date, and physically (i.e., flow) in the interim flow period as recorded by the data-logging flow meter.

Average daily influent flow varied from roughly 2.5 times greater than daily discharge to nearly 40 times greater. The variation in flow, as well as the number of days of active dredging (33) compared to the number of days of weir discharge (29), accounted for a significantly greater amount of material entering the site than leaving, which is clearly the objective of the CDF. In addition, the concentrations of most contaminants in the influent were significantly greater than weir concentrations. Table 3-8 shows the comparison of the total amount of contaminants in the influent and discharge and represents the contaminant loadings to the CDF. The patterns that exist are predictable given the sediment-clinging nature of PCBs and inorganics. Since the majority of these contaminants are sediment-sorbed, and the weir had very low concentrations of suspended material, we expect to see a much greater amount of contaminants enter the CDF than be discharged.

Table 3-6. High-resolution PCB analytical results for Pedricktown background, weir, and discharge plume samples.

Parameter	Units	Detection Limits	BG 10/29/98	BG 11/12/98	BG 11/16/98	BG 11/19/98				
Non Ortho-Coplanar PCB Congeners										
81-TCB	PG/L	6.97-11.11	6.7	ND	8.19	7.41				
77-TCB	PG/L	12.9	24	94.4	12.9	18.2				
126-PeCB	PG/L	1.09-5.21	ND	5.93	ND	ND				
169-HxCB	PG/L	1.82-5.54	ND	ND	ND	ND				
Parameter	**Units**	**Detection Limits**	**WEIR 10/29/98**	**WEIR 11/2/98**	**WEIR 11/5/98**	**WEIR 11/9/98**	**WEIR 11/12/98**	**WEIR 11/16/98**	**WEIR 11/19/98**	**WEIR 11/24/98**
Non Ortho-Coplanar PCB Congeners										
81-TCB	PG/L	6.97-11.11	ND	ND	ND	ND	7.71	6.86	8.8	ND
77-TCB	PG/L	12.9	47.6	44.4	63.1	ND	42.6	34.3	27.4	27.8
126-PeCB	PG/L	1.09-5.21	ND	ND	ND	ND	3.96	ND	2.85	ND
169-HxCB	PG/L	1.82-5.54	ND	ND	ND	ND	ND	ND	ND	ND
Parameter	**Units**	**Detection Limits**	**MIX 10/29/98**	**MIX 11/2/98**	**MIX 11/5/98**	**MIX 11/9/98**	**MIX 11/12/98**	**MIX 11/16/98**	**MIX 11/19/98**	
Non Ortho-Coplanar PCB Congeners										
81-TCB	PG/L	6.97-11.11	9.1	8.34	ND	ND	ND	7.5	6.96	
77-TCB	PG/L	12.9	63.8	29.7	28.2	26.6	37.9	28.6	19.9	
126-PeCB	PG/L	1.09-5.21	ND	2.84	ND	ND	2.78	ND	ND	
169-HxCB	PG/L	1.82-5.54	ND	2.05	ND	ND	ND	3	ND	

Table 3-7. High-resolution PCB analytical results for the Pedricktown inlet slurry samples.

Parameter	Units	Detection Limits	INLET 10/15/98	INLET 10/26/98	INLET 11/2/98	INLET 11/5/98
Non Ortho-Coplanar PCB Congeners						
81-TCB	pg/L	6.97-11.11	397	629	160	ND
77-TCB	pg/L	12.9	16767	37030	8336	ND
126-PeCB	pg/L	1.09-5.21	922	1342	371	ND
169-HxCB	pg/L	1.82-5.54	204	288	82.5	ND
Mono- and Di-Ortho PCB Congeners						
8 Di	ng/L	2.53-7.94	U	U	U(EMPC)	U
18 Tri	ng/L	NU	11.9	19.1	6.6	23.0
28 Tri	ng/L	NU	36.5	54.7	18.2	62.7
37 Tri	ng/L	5.8	U	23.3	7.2	22.2
52 Tetra	ng/L	NU	54.0	84.1	26.6	95.9
49 Tetra	ng/L	NU	42.1	68.4	22.4	79.4
47 Tetra	ng/L	NU	25.7	38.2	13.1	45.5
44 Tetra	ng/L	NU	35.1	55.5	17.7	64.4
42 Tetra	ng/L	NU	16.6	23.5	8.3	27.9
64 Tetra	ng/L	NU	25.4	35.8	12.2	24.5
74 Tetra	ng/L	NU	21.1	36.2	10.2	35.6
70 Tetra	ng/L	NU	49.1	84.7	26.2	91.6
66 Tetra	ng/L	2.36-7.94	U	U	U	U
80 Tetra	ng/L	NU	48.2	80.6	25.2	89.7
60 Tetra	ng/L	NU	25.7	39.9	13.6	45.5
95 Penta	ng/L	NU	67.2	106.8	36.4	133.8
91 Penta	ng/L	NU	13.4	22.2	7.0	26.0
92 Penta	ng/L	NU	17.3	24.4	8.7	32.5
84/101 Penta	ng/L	NU	114.0	178.2	57.0	220.4
99 Penta	ng/L	NU	47.8	73.9	23.0	85.5
119 Penta	ng/L	2.36-7.94	U	U	U	U
97 Penta	ng/L	NU	21.3	34.3	10.3	35.9
86 Penta	ng/L	2.36-7.94	U	U	U	U
87 Penta	ng/L	NU	33.2	52.7	14.7	58.3
120 Penta	ng/L	5.8	U	17.2	5.4	17.1
110 Penta	ng/L	NU	83.4	130.2	38.8	146.9
82 Penta	ng/L	NU	11.9	21.2	6.5	23.9
123 Penta	ng/L	2.36-7.94	U	U	U	U
118Penta	ng/L	NU	77.0	123.5	36.5	136.4
114 Penta	ng/L	2.36-7.94	U	U	U	U
105/127 Penta	ng/L	NU	30.0	46.4	14.7	48.2
151 Hexa	ng/L	5.8	U	42.2	12.2	53.3
149 Hexa	ng/L	NU	97.6	139.0	46.0	174.5
146 Hexa	ng/L	NU	22.7	34.0	11.1	41.1
153 Hexa	ng/L	NU	109.2	168.1	54.3	208.6
168 hexa	ng/L	NU	26.9	42.8	13.0	48.9
141 Hexa	ng/L	NU	20.8	32.7	9.4	39.1
137 Hexa	ng/L	2.36-7.94	U	U	U	U
138 Hexa	ng/L	NU	124.6	184.5	56.6	224.4
158 Hexa	ng/L	5.8-7.71	U	U	5.8	20.1
166 Hexa	ng/L	2.36-7.94	U	U	U	U

Table 3-7. Continued

Parameter	Units	Detection Limits	INLET 10/15/98	INLET 10/26/98	INLET 11/2/98	INLET 11/5/98
128/167 Hexa	ng/L	NU	24.1	35.0	11.5	U
156 Hexa	ng/L	NU	12.3	17.9	5.4	20.1
157 Hexa	ng/L	2.36-7.94	U	U	U	U
179 Hepta	ng/L	NU	16.0	26.0	7.6	32.8
187 Hepta	ng/L	NU	49.3	72.2	22.0	88.0
183 Hepta	ng/L	NU	20.6	27.2	9.4	36.3
185 Hepta	ng/L	2.36-7.94	U	U	U	U
174 Hepta	ng/L	NU	39.0	56.6	19.0	80.8
177 Hepta	ng/L	NU	25.2	40.4	11.2	52.5
171Hepta	ng/L	2.36-5.80	U	17.2	U	20.3
180 Hepta	ng/L	NU	89.2	132.7	41.4	182.4
191 Hepta	ng/L	2.36-7.94	U	U	U	U
170/190 Hepta	ng/L	NU	34.4	60.0	17.4	U
189 Hepta	ng/L	2.36-7.94	U	U	U	U
200 Octa	ng/L	2.36-7.94	U	U	U	U
198 Octa	ng/L	2.36-7.94	U	U	U	U
201 Octa	ng/L	NU	65.0	107.4	33.9	112.8
196/203 Octa	ng/L	23.8	U(EMPC)	68.9	22.3	81.2
195 Octa	ng/L	5.8	U	21.4	6.7	21.5
194 Octa	ng/L	NU	30.7	46.5	16.1	65.1
205 Octa	ng/L	2.36-7.94	U	U	U	U
208 Nona	ng/L	NU	101.4	173.2	51.3	144.3
207 Nona	ng/L	2.36-7.71	11.8	U	U	17.2
206 Nona	ng/L	NU	204.8	333.7	97.3	293.9
209 Deca	ng/L	NU	329.4	528.4	156.2	485.4
Total Sum of Congeners	ng/L		2381	3922	1213	4218

U - Undetected with a method detection limit given in parenthesis.
EMPC - A peak was detected that did not meet the method identification criteria. The peak areas were used to calculate an estimated maximum possible concentration for the detection limit.
NU – Not used, analyte was detected in all samples.

In total, 7.0 kg of PCBs were introduced into the Pedricktown CDF throughout the maintenance dredging project, compared with only 0.02 kg released (based on non-ortho coplanar results), resulting in a retention of very close to 100 percent. This is because the mono- and di-ortho congeners detected in the influent samples had concentrations several orders of magnitude greater than the non-ortho coplanar congeners, which were the only PCBs detected in weir samples. Any assumption of how to treat non-detects (i.e., half ofthe detection limit) would give similar results. In addition, the validity of the non-ortho congener data is questionable given the detected concentrations in the method blanks. If this data were rejected due to laboratory error, the CDF would show further improved retention of PCBs.

Table 3-8. Influent and discharge contaminant loads associated with the Pedricktown CDF during maintenance dredging operations, using zero for non-detected analytes. The percent of each contaminant sequestered in the CDF is shown in the far right column.

Analyte	CDF Influent (kg)	Discharge to the River (kg)	Total Retained by CDF (kg)	% Retained by CDF
Total PCBs	7.0	0.02	6.98	99.714
Aluminum	1,501,188	135	1,501,052	99.991
Antimony	706		706	100
Arsenic	5.20		5.20	100
Barium	7,543	11.60	7,532	99.846
Beryllium	55.42		55.42	100
Cadmium	186.83	0.53	186.30	99.715
Chromium	5,174	0.50	5,174	99.990
Cobalt	1,888		1,888	100
Copper	3,555	2.77	3,552	99.922
Cyanide	29.64		29.64	100
Iron	1,989,994	393	1,989,602	99.980
Lead	6,862		6,862	100
Manganese	67,910	2,697	65,213	96.028
Mercury	42.16		42.16	100
Nickel	3,502	22.16	3,480	99.367
Selenium	4.50	0.15	4.35	96.747
Silver	84.20		84.20	100
Vanadium	5,156		5,156	100
Zinc	28,073	138	27,935	99.509

Based on the mass balance analysis, we estimate that a total of 3.6 million kg of metals was introduced into the Pedricktown North CDF during the maintenance dredging period. Nearly 3.5 million kg (or 97 percent) of the total metals introduced were aluminum and iron. The presence of aluminum and iron is expected given regional concentrations of these elements; these are basic elements that are commonly found in background samples throughout the mid-Atlantic area. For comparison to reference data, these data were

converted to dry weight concentrations, as opposed to the mg/L slurry obtained for the purposes of this study. The dry weight concentration of aluminum in the inlet samples ranged from 8,600 to 30,000 mg/kg and the dry weight concentration of iron was between 2,600 and 60,000 mg/kg. While there is no known source of applicable, regional background sediment data, the most recent Ecological Risk Assessment guidance documents summarized the geometric mean concentration of several chemicals throughout soils and surficial materials of the Eastern U.S. The geometric mean concentration of aluminum in the Eastern U.S. was 33,000 mg/kg and 14,000 mg/kg was the geometric mean iron concentration.

Given the range and ubiquity of aluminum and iron throughout the country, and particularly within soils of the Eastern Seaboard, their presence in the Marcus Hook sediments is expected. However, neither of these metals has established sediment toxicity criteria, and they are not bio-available or toxic in solid state (i.e., bound within sediments). The most-widely accepted toxicity criteria, Effects-Range Low and Medium (developed by Long and Morgan [1991] and revised by Long et al [1995]), do not include toxicity values for aluminum or iron because limited data exists on the toxicity of these metals. Similarly, no toxicity criteria have been developed to screen aluminum or iron for risks to earthworms (the representative soil invertebrate typically considered as a conservative indicator of potential ecological risk from soil contaminants).

Throughout the dredging operation, nearly 3.5 million kg of metals were placed in the site and less than 3,500 kg of metals were released through the weir. The only inorganic to have greater than 1,000 kg discharged was manganese, which had a total influent of nearly 70,000 kg and a total discharge of roughly 2,700 kg, resulting in a retention of 96 percent. Selenium had the next lowest retention of inorganics, 97 percent. All other metals had retention of 99 to 100 percent.

Aluminum has a historic mean concentration in the Delaware River obtained from the USEPA STORET database of 1.65 mg/L. The highest concentration of total aluminum released from the weir throughout the study was 0.91 mg/L. Similarly, iron concentrations released from the weir never exceed the STORET historic Delaware River concentration of 1.86 mg/L. Clearly, neither aluminum nor iron concentrations present exposures beyond ambient levels, and neither is associated with potential ecological risks.

3.3 TOTAL MAXIMUM DAILY LOAD

The effects of the Pedricktown discharge on the ambient contaminant concentrations in the Delaware River were evaluated using methods similar to total loadings of the CDF. Daily impacts were evaluated, because this allows a more conservative assessment of potential risks to the environment. If we had considered contaminant discharge to the river over the entire month-long period, the low flow of the discharge ($3.89*10^8$ liters over the period of discharge) relative to the river flow (118.47 m^3/sec or $1.02*10^{10}$ liters over the same 29 day period) might have masked potential

contamination and daily high loads. The data discussed in this section are provided in Appendix D of this report.

Daily cumulative impacts of the Pedricktown discharge were evaluated by multiplying the daily contaminant concentrations of weir samples (each weir sample date was considered representative of the surrounding three- or four-day time period) by the daily discharge as measured with the flow meter. The discharge flow was measured in the most intact and undisrupted discharge pipe of the three at the Pedricktown CDF. The sampled flow was multiplied by three to account for the total flow from the discharge pipes. Given the structure and potentially limited flow of the other pipes, this method of estimating total discharge over-estimates the outflow. Thus, this method is believed to be conservative in estimating potential impacts to the Delaware River.

The ambient river inorganic concentrations were determined using multiple data resources. The DRBC Toxics Management Program provided data on the total and dissolved concentrations of copper, lead, and zinc, and the total mercury concentration (Fikslin 1999). For other metals, data was taken from the USEPA database (USEPA 1999). When a sufficient amount of applicable data was available to draw reasonable conclusions regarding appropriate ambient concentrations, the USEPA data were used. The USEPA data collected from autumn sampling events later than 1985 (1990 for some analytes) were used to obtain total concentrations of aluminum, cadmium, chromium, iron, manganese, and silver. All other inorganic data used to approximate ambient river concentrations came from the background data collected for this study. The mean concentration of the four background samples was used.

Once the data were identified, the first part of this analysis required multiplying the ambient river concentrations by the assumed river flow to obtain the daily river loading in mg. River flow was determined from DRBC (1998), using a conservative, low flow rate of 118.47 m^3/sec for the section of river where Pedricktown is located (Zone 5, DRBC 1998). Similarly, daily discharge loads were determined following the same methods used to determine daily discharge for Section 3.2. Daily loading estimates of the river and discharge are provided in Table D-1. Once both river and discharge concentrations were converted to daily loadings, they were summed to determine the cumulative loading of each analyte in the river following discharge from the CDF (Table D-2). Finally, the cumulative loading was divided by the cumulative flow, the sum of the ambient river flow and daily discharge flow, to obtain cumulative concentrations (Table D-3). For all analytes, but the essential nutrients (calcium, magnesium, potassium, and sodium), total concentrations downstream of the Pedricktown discharge were not changed from ambient river concentrations during most days of the CDF discharge. When changes in river concentrations did occur, no water quality criteria were violated. Non-ortho coplanar PCB loads were not analyzed with this method since the method did not indicate differences between the method blank, background, weir, or discharge plume samples. Similarly, the mono and di-ortho coplanar PCBs were not analyzed because none were detected in the weir samples.

The lack of a substantial change in river concentrations is indicative of the relative flows of the river and the weir discharge and the similarity between the ambient river and

discharge plume sample results. The river flow was on the order of 10 billion L/day. The discharge flow varied from 2 to 20 million L/day. Given the difference in the order of magnitude of the flows (river flow is three to four orders of magnitude or one hundred to one thousand times greater than the discharge flow), discharge concentrations had to be greater than river concentrations by several orders of magnitude to have noticeable cumulative impacts on river concentrations. Actual discharge concentrations were similar to ambient river concentrations in nearly all circumstances. Therefore, this loadings analysis suggests that minimal, if any, impacts resulted from the discharge of the Pedricktown CDF during the period of maintenance dredging of the Marcus Hook reach of the navigation channel.

4.0 SUMMARY

The results of the various methods of analysis used in this study indicate that the discharge from the Pedricktown North CDF weir did not alter water quality within the Delaware River or present environmental risks to the Delaware River biota. Comparisons to water quality criteria indicated that concentrations in the discharge rarely exceeded acute criteria during the study, suggesting that potential risks are low. Acute criteria are the most appropriate screening criteria for the weir discharge data, because acute exposures are considered limited-discharge exposures. Dredging occurs during a short season, and typically individual CDFs are not used in consecutive years. Therefore, CDF discharges are qualitatively different from typical point-source discharges, such as industrial outfalls, because they are not used continuously for long periods of time. The chronic criteria are designed to be protective of aquatic life continuously exposed to a concentration within a discharge source.

Analytes that exceeded DRBC water quality criteria were metals that are present in background samples at levels similar to those in the weir and discharge plume. In addition, samples rarely exceeded criteria by more than a factor of two. Given the conservative assumptions that factor into all aspects of chemical analysis, these methods are designed to be protective of the environment. Comparisons to criteria often overstate, not understate, the potential for risks to occur. Water quality criteria are defined as levels that are protective of human health and the environment, and exceedance of criteria do not necessarily indicate impacts to individuals would occur, and population-level impacts from infrequent, low-level exceedances are unlikely. Typically under USEPA Guidelines for Risk Assessment, site-related contaminant exceedances that result in Environmental Effects Quotients, or the amount by which samples exceed water quality criteria, of less than 10 are not considered to be likely to cause significant impacts to the environment.

Estimations of inputs to the disposal site relative to the discharge from the weir indicated that the Pedricktown North CDF was over 95 percent efficient at trapping contaminants found in the Marcus Hook range sediments. VOCs were not detected in influent or weir samples, and although a few pesticides were detected in influent samples, none were detected at the weir. Mass balance calculations suggested that approximately 7.0 kg of PCBs were pumped into the site and only 0.02 kg were released back into the river through the weir; therefore resulting in a 97.2 percent retention of PCBs. The site was also highly efficient at sequestering heavy metals from the estuary. In total about 3.6 million kg of metals were introduced into the CDF and only 3,500 kg were released throughout the discharge period. Approximately 99 percent of the contaminants introduced to the site and 90 percent of those released from the weir were the metals, aluminum, iron, and manganese, which are among the most common naturally occurring elements.

The results of the daily chemical load analysis indicate that daily impacts on ambient river metals concentrations were very small; often no change resulted from the Pedricktown North CDF discharge. Where changes in river concentrations did occur, no water quality criteria were violated. The conditions that were assumed for the daily

chemical load analysis were highly conservative in many ways. Flow used for ambient river conditions were the lowest available estimates, which could potentially overstate the impacts of the CDF discharge. Since no impacts were determined under these conditions, it is unlikely that impacts would result under less conservative conditions. In addition, under the Delaware River Philadelphia to the Sea sediment PCB analysis (Burton 1997), the sediment in the portion of the Delaware River navigational channel surrounding the Marcus Hook area was found to have the highest concentrations of PCBs in the Philadelphia to the Sea navigational channel. Since the current channel maintenance operation dredged this portion of the channel and did not produce significant impacts to the environment, it is unlikely that less-contaminated sediments would produce impacts. These findings provide additional evidence that contaminants, particularly metals and PCBs, in CDF weir discharges are unlikely to cause environmental impacts to the river.

Finally, it is important to consider, as is mentioned in DNREC (1999), that these results, while conservative in a number of ways, are applicable only to this CDF. Properties of the CDF, such as size, vegetation, and cell structure, play an important role in determining flow through the CDF. It is possible that, given a higher flow or lower residence time, another CDF might have greater contaminant concentrations in the discharge, even if less contaminated sediment was placed in the site. It is also possible that the size, structure, and retention capabilities of the Pedricktown North CDF were beyond what would have been necessary to sequester contaminants from the dredged material. The Pedricktown North CDF has clearly been demonstrated to be highly effective in sequestering contaminants, and may provide a model for management of other CDFs.

These questions can be answered by further investigating the relationship between bulk sediment, influent, CDF properties, and discharge. As we gain data and knowledge describing this relationship, we can highlight key properties of CDFs that may define the ability of a CDF to regulate the potential impacts of dredged material to the environment. This study of the maintenance dredging of the Marcus Hook reach of the Philadelphia to the Sea navigational channel and placement of material into the Pedricktown CDF shows that Delaware River navigational channel sediments can be dredged with no resulting harmful impacts to the environment.

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APPENDIX A

Pedricktown North Confined Disposal Facility
Inorganics Laboratory Results

ENVIRONMENTAL SERVICES

CHAIN-OF-CUSTODY RECORD

WB

Page _____ of _____

Project Contact: Jessica Jarvar

Turn Around Requirements: HT expires 11/30/98

Project No.: 4119-007

Project Name: Pedricktown

Sampler (print): EK

Signature: EK

Sample I.D. No.	Comp*	Grab	Date	Time	Protocol CWA	Protocol SW846	NUMBER OF SAMPLES	Hold	VOC	ADDITIONAL REQUIREMENTS Enviro Lab I.D
BG1116		X	11/26/98	—		✓	1		1	98113044

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
[signature]	11/25	1030					

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:
			Winston Thacey	11/25/98	10:30	

*Homogenize all composite samples prior to analysis

White – Lab Yellow – Office Pink – Field

Inv

ENVIROSYSTEMS, INC.

INORGANICS DATA REPORTING SHEET

Versar

Date Sampled:	10/15/98	**ICP Analysis Date:**	12/17/98
Date Received:	10/16/98	**Mercury Analysis Date:**	11/6/98
Project:	PACOE Pedricktown	**GFAA Analysis Date:**	11/20/98

Client ID:		INLET 101598	BLANK	LCS	
Lab ID		98102567	BLK 1105	LCS 1105	
Matrix		Total	Water	Water	
Unit		(mg/L)	(mg/L)	(mg/L)	
Parameter	**Method**			% Recovery	**RL**
Aluminum	200.7	567	<0.007	0.211	106	0.007
Antimony	200.7	0.400	<0.019	0.215	108	0.019
Arsenic	206.2	<0.010	<0.010	0.018	90	0.010
Barium	200.7	4.13	<0.001	0.201	101	0.001
Beryllium	200.7	0.031	<0.001	0.204	102	0.001
Cadmium	200.7	0.069	<0.002	0.207	104	0.002
Calcium	200.7	147	0.283	0.203	102	0.001
Chromium	200.7	1.87	<0.002	0.187	94	0.002
Cobalt	200.7	0.646	<0.006	0.194	97	0.006
Copper	200.7	1.28	<0.002	0.187	94	0.002
Iron	200.7	1080	0.015	0.211	106	0.005
Lead	239.2	2.28	<0.001	0.020	100	0.001
Magnesium	200.7	239	0.031	0.224	112	0.001
Manganese	200.7	7.01	<0.001	0.199	100	0.001
Mercury	245.1	0.0178	<0.0002	0.0047	94	0.0002
Nickel	200.7	1.60	<0.002	0.202	101	0.002
Potassium	200.7	74.4	0.086	0.901	90	0.051
Selenium	270.2	0.0018	<0.001	0.020	100	0.001
Silver	200.7	0.052	<0.002	0.051	102	0.002
Sodium	200.7	275	<0.100	0.202	101	0.100
Thallium	279.2	<0.001	<0.001	0.018	90	0.001
Vanadium	200.7	2.01	<0.003	0.200	100	0.003
Zinc	200.7	10.7	<0.002	0.201	101	0.002

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ENVIROSYSTEMS, INC.

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Phone (410) 964-0330 • Fax (410) 740-9306
Email: info@envsystems.com • Webpage: www.envsystems.com/envsys

Inv 98378
sent 12/30

December 18, 1998

Erin Klingebiel
Versar, Inc.
9200 Rumsey Road
Columbia, MD 21045-1934

Re: ENVSYS Report #R9812372

Dear Ms. Klingebiel:

Enclosed is the Analytical Data Report for the sample received November 25, 1998 for VOC analysis. This sample has been analyzed according to U.S. EPA protocol and Chain of Custody instructions.

Please do not hesitate to call if you have questions, comments or require additional information.

Sincerely,

Mohan Khare, Ph.D.
President/CEO

MK/cmc
Enclosures

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG1116

Lab Name: ENVIROSYSTEMS Contract:

Lab Code: ENVSYS Case No.: V1125 SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 98113044

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 113044

Level: (low/med) LOW Date Received: 11/25/98

% Moisture: not dec. Date Analyzed: 11/25/98

GC Column: RTX-502.2 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

ENVIROSYSTEMS, INC.

INORGANICS DATA REPORTING SHEET

Versar

Date Sampled:	11/16/98	**ICP Analysis Date:**	12/17/98
Date Received:	11/30/98	**Mercury Analysis Date:**	11/6/98
Project:	PACOE Pedricktown	**GFAA Analysis Date:**	1/19/99

Client ID:		BG 1116	WEIR 1116	MIX 1116	BG 1119	
Lab ID		98113052	98113053	98113054	98113055	
Matrix		Total	Total	Total	Total	
Unit		(mg/L)	(mg/L)	(mg/L)	(mg/L)	
Parameter	**Method**					**RL**
Aluminum	200.7	0.425	0.380	0.446	0.340	0.007
Antimony	200.7	<0.019	<0.019	0.033	0.041	0.019
Arsenic	206.2	<0.010	<0.010	<0.010	<0.010	0.010
Barium	200.7	0.042	0.092	0.034	0.039	0.001
Beryllium	200.7	<0.001	<0.001	<0.001	<0.001	0.001
Cadmium	200.7	<0.002	0.004	0.004	0.004	0.002
Calcium	200.7	51.3	111	44.5	54.5	0.001
Chromium	200.7	<0.002	<0.002	<0.002	<0.002	0.002
Cobalt	200.7	<0.006	<0.006	<0.006	<0.006	0.006
Copper	200.7	0.046	<0.002	<0.002	0.011	0.002
Iron	200.7	0.596	0.840	0.779	0.485	0.005
Lead	239.2	<0.001	<0.001	<0.001	<0.001	0.001
Magnesium	200.7	99.2	80.8	65.1	110	0.001
Manganese	200.7	<0.001	7.44	0.220	<0.001	0.001
Mercury	245.1	<0.0002	<0.0002	<0.0002	<0.0002	0.0002
Nickel	200.7	<0.002	0.056	<0.002	<0.002	0.002
Potassium	200.7	27.7	19.9	16.8	27.8	0.051
Selenium	270.2	0.0033	<0.001	0.0015	0.0043	0.001
Silver	200.7	<0.002	<0.002	0.006	0.006	0.002
Sodium	200.7	793	222	486	913	0.100
Thallium	279.2	<0.001	<0.001	<0.001	<0.001	0.001
Vanadium	200.7	<0.003	<0.003	<0.003	<0.003	0.003
Zinc	200.7	0.008	0.264	0.018	0.005	0.002

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INORGANICS DATA REPORTING SHEET

Versar

Date Sampled:	11/2/98	**ICP Analysis Date:**	12/17/98
Date Received:	11/13/98	**Mercury Analysis Date:**	11/6/98
Project:	PACOE Pedricktown	**GFAA Analysis Date:**	11/20/98

Client ID:		MIX 1102	BLANK	LCS		
Lab ID		98112893	BLK 1117	LCS 1117		
Matrix		Total	Water	Water		
Unit		(mg/L)	(mg/L)	(mg/L)		
Parameter	**Method**				% Recovery	**RL**
Aluminum	200.7	0.982	0.011	0.223	112	0.007
Antimony	200.7	<0.019	<0.019	0.217	109	0.019
Arsenic	206.2	<0.010	<0.010	0.020	100	0.010
Barium	200.7	0.047	<0.001	0.190	95	0.001
Beryllium	200.7	<0.001	<0.001	0.204	102	0.001
Cadmium	200.7	<0.002	<0.002	0.204	102	0.002
Calcium	200.7	80.6	0.657	0.196	98	0.001
Chromium	200.7	<0.002	<0.002	0.194	97	0.002
Cobalt	200.7	<0.006	<0.006	0.198	99	0.006
Copper	200.7	<0.002	<0.002	0.199	100	0.002
Iron	200.7	1.24	0.017	0.22	110	0.005
Lead	239.2	<0.001	<0.001	0.020	100	0.001
Magnesium	200.7	65.7	0.030	0.208	104	0.001
Manganese	200.7	2.68	<0.001	0.200	100	0.001
Mercury	245.1	<0.0002	<0.0002	0.0043	86	0.0002
Nickel	200.7	0.026	<0.002	0.205	103	0.002
Potassium	200.7	16.0	0.062	0.934	93	0.051
Selenium	270.2	<0.001	<0.001	0.020	100	0.001
Silver	200.7	<0.002	<0.002	0.052	104	0.002
Sodium	200.7	440	<0.100	0.229	115	0.100
Thallium	279.2	<0.001	<0.001	0.018	90	0.001
Vanadium	200.7	<0.003	<0.003	0.203	102	0.003
Zinc	200.7	0.176	<0.002	0.196	98	0.002

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INORGANICS DATA REPORTING SHEET

Versar

Date Sampled:	11/5/98	**ICP Analysis Date:**	11/20/98
Date Received:	11/13/98	**Mercury Analysis Date:**	11/18/98
Project:	PACOE Pedricktown	**GFAA Analysis Date:**	11/20/98

Client ID:		MIX 1109	MIX 110598	INLET 110598	WEIR 110598	
Lab ID		98112887	98112888	98112889	98112890	
Matrix		Total	Total	Total	Total	
Unit		(mg/L)	(mg/L)	(mg/L)	(mg/L)	
Parameter	**Method**					**RL**
Aluminum	200.7	1.19	1.22	567	0.885	0.007
Antimony	200.7	<0.019	<0.019	0.580	<0.019	0.019
Arsenic	206.2	<0.010	<0.010	<0.010	<0.010	0.010
Barium	200.7	0.041	0.055	6.18	0.102	0.001
Beryllium	200.7	<0.001	<0.001	0.029	<0.001	0.001
Cadmium	200.7	<0.002	<0.002	0.079	<0.002	0.002
Calcium	200.7	45.3	60.0	334	111	0.001
Chromium	200.7	<0.002	<0.002	2.00	<0.002	0.002
Cobalt	200.7	<0.006	<0.006	0.844	<0.006	0.006
Copper	200.7	<0.002	0.012	1.48	<0.002	0.002
Iron	200.7	1.36	2.78	1470	1.34	0.005
Lead	239.2	<0.001	<0.001	2.24	<0.001	0.001
Magnesium	200.7	65.4	53.6	349	75.0	0.001
Manganese	200.7	0.084	2.67	144	8.08	0.001
Mercury	245.1	<0.0002	<0.0002	<0.0002	<0.0002	0.0002
Nickel	200.7	0.008	0.027	1.73	0.056	0.002
Potassium	200.7	20.2	14.1	111	15.4	0.051
Selenium	270.2	0.0023	0.0013	0.0033	<0.001	0.001
Silver	200.7	0.004	<0.002	0.063	<0.002	0.002
Sodium	200.7	700	458	352	440	0.100
Thallium	279.2	<0.001	<0.001	<0.001	<0.001	0.001
Vanadium	200.7	0.005	<0.003	2.14	<0.003	0.003
Zinc	200.7	0.018	0.137	10.1	0.257	0.002

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INORGANICS DATA REPORTING SHEET

Versar

Date Sampled:	11/12/98	**ICP Analysis Date:**	11/20/98
Date Received:	11/13/98	**Mercury Analysis Date:**	11/18/98
Project:	PACOE Pedricktown	**GFAA Analysis Date:**	11/20/98

Client ID:		MIX 1112	WEIR 1112	BG 1112	WEIR 1109	
Lab ID		98112883	98112884	98112885	98112886	
Matrix		Total	Total	Total	Total	
Unit		(mg/L)	(mg/L)	(mg/L)	(mg/L)	
Parameter	**Method**					**RL**
Aluminum	200.7	1.60	0.740	8.57	0.910	0.007
Antimony	200.7	<0.019	<0.019	<0.019	<0.019	0.019
Arsenic	206.2	<0.010	<0.010	<0.010	<0.010	0.01
Barium	200.7	0.086	0.105	0.078	0.143	0.001
Beryllium	200.7	<0.001	<0.001	<0.001	<0.001	0.001
Cadmium	200.7	<0.002	<0.002	<0.002	<0.002	0.002
Calcium	200.7	99.3	115	91.3	117	0.001
Chromium	200.7	<0.002	<0.002	0.016	<0.002	0.002
Cobalt	200.7	<0.006	<0.006	<0.006	<0.006	0.006
Copper	200.7	<0.002	<0.002	0.018	<0.002	0.002
Iron	200.7	2.60	1.13	12.5	1.67	0.005
Lead	239.2	<0.001	<0.001	<0.001	<0.001	0.001
Magnesium	200.7	73.9	79.1	91.3	80.1	0.001
Manganese	200.7	5.16	6.76	0.476	9.10	0.001
Mercury	245.1	<0.0002	<0.0002	<0.0002	<0.0002	0.0002
Nickel	200.7	0.037	0.056	0.018	0.054	0.002
Potassium	200.7	21.4	17.3	27.7	15.1	0.051
Selenium	270.2	0.0016	0.002	0.0072	0.0012	0.001
Silver	200.7	<0.002	<0.002	<0.002	<0.002	0.002
Sodium	200.7	405	361	867	462	0.100
Thallium	279.2	<0.001	<0.001	<0.001	<0.001	0.001
Vanadium	200.7	<0.003	<0.003	0.028	<0.003	0.003
Zinc	200.7	0.209	0.267	0.094	0.192	0.002

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INORGANICS DATA REPORTING SHEET

Versar

Date Sampled:	11/3/98	**ICP Analysis Date:**	11/20/98
Date Received:	11/3/98	**Mercury Analysis Date:**	11/6/98
Project:	PACOE Pedricktown	**GFAA Analysis Date:**	11/20/98

Client ID:		BG 102998	INLET 101598	MIX 102998	WEIR 102998	
Lab ID		98112754	98112755	98112756	98112757	
Matrix		Total	Total	Total	Total	
Unit		(mg/L)	(mg/L)	(mg/L)	(mg/L)	
Parameter	**Method**					**RL**
Aluminum	200.7	0.217	663	9.24	0.750	0.007
Antimony	200.7	<0.019	<0.019	<0.019	<0.019	0.019
Arsenic	206.2	<0.010	<0.010	<0.010	<0.010	0.010
Barium	200.7	0.033	3.54	0.083	0.036	0.001
Beryllium	200.7	<0.001	<0.001	<0.001	<0.001	0.001
Cadmium	200.7	0.024	0.078	0.007	0.004	0.002
Calcium	200.7	44.4	169	40.9	175	0.001
Chromium	200.7	<0.002	2.26	0.017	0.003	0.002
Cobalt	200.7	<0.006	0.778	<0.006	<0.006	0.006
Copper	200.7	<0.002	1.532	0.010	0.013	0.002
Iron	200.7	0.611	127	12.6	0.638	0.005
Lead	239.2	0.002	2.79	0.003	<0.001	0.001
Magnesium	200.7	47.4	275	47.7	104	0.001
Manganese	200.7	<0.001	9.70	0.762	5.66	0.001
Mercury	245.1	<0.0002	0.0211	<0.0002	<0.0002	0.0002
Nickel	200.7	0.003	1.77	0.019	0.063	0.002
Potassium	200.7	21.6	8.52	15.0	19.4	0.051
Selenium	270.2	0.0033	0.0014	0.0014	<0.001	0.001
Silver	200.7	0.011	<0.002	0.004	<0.002	0.002
Sodium	200.7	621	83.3	502	330	0.100
Thallium	279.2	<0.001	<0.001	<0.001	<0.001	0.001
Vanadium	200.7	<0.003	2.36	0.023	<0.003	0.003
Zinc	200.7	0.046	12.1	0.142	0.578	0.002

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INORGANICS DATA REPORTING SHEET

Versar

Date Sampled:	11/3/98	**ICP Analysis Date:**	11/20/98
Date Received:	11/3/98	**Mercury Analysis Date:**	11/6/98
Project:	PACOE Pedricktown	**GFAA Analysis Date:**	11/20/98

Client ID:		INLET 102698	INLET 1102	WEIR 1102	
Lab ID		98112750	98112751	98112753	
Matrix		Total	Total	Total	
Unit		(mg/L)	(mg/L)	(mg/L)	
Parameter	**Method**				**RL**
Aluminum	200.7	625	577	0.738	0.007
Antimony	200.7	0.400	0.540	<0.019	0.019
Arsenic	206.2	<0.010	0.013	<0.010	0.010
Barium	200.7	1.82	1.72	0.049	0.001
Beryllium	200.7	0.043	0.037	<0.001	0.001
Cadmium	200.7	0.080	0.071	<0.002	0.002
Calcium	200.7	199	154	139	0.001
Chromium	200.7	2.13	2.05	<0.002	0.002
Cobalt	200.7	0.801	0.713	<0.006	0.006
Copper	200.7	1.59	1.14	0.015	0.002
Iron	200.7	1260	1140	0.776	0.005
Lead	239.2	3.35	2.66	<0.001	0.001
Magnesium	200.7	290	260	86.4	0.001
Manganese	200.7	9.70	0.023	4.86	0.001
Mercury	245.1	0.0237	0.0139	<0.0002	0.0002
Nickel	200.7	1.71	0.009	0.051	0.002
Potassium	200.7	85.2	76.5	15.7	0.051
Selenium	270.2	0.0018	0.0018	<0.001	0.001
Silver	200.7	0.058	0.052	<0.002	0.002
Sodium	200.7	56.0	131	678	0.100
Thallium	279.2	<0.001	<0.001	<0.001	0.001
Vanadium	200.7	1.92	2.01	<0.003	0.003
Zinc	200.7	12.4	10.7	0.414	0.002

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INORGANICS DATA REPORTING SHEET

Versar

Date Sampled:	11/16/98	**ICP Analysis Date:**	12/17/98
Date Received:	11/30/98	**Mercury Analysis Date:**	11/6/98
Project:	PACOE Pedricktown	**GFAA Analysis Date:**	1/19/99

Client ID:		WEIR 1119	MIX 1119	WEIR 1124	EB 112598	
Lab ID		98113056	98113057	98113058	98113059	
Matrix		Total	Total	Total	Total	
Unit		(mg/L)	(mg/L)	(mg/L)	(mg/L)	
Parameter	**Method**					**RL**
Aluminum	200.7	0.214	0.471	0.288	<0.007	0.007
Antimony	200.7	<0.019	0.026	<0.019	<0.019	0.019
Arsenic	206.2	<0.010	<0.010	<0.010	<0.010	0.010
Barium	200.7	0.084	0.032	0.075	<0.001	0.001
Beryllium	200.7	<0.001	<0.001	<0.001	<0.001	0.001
Cadmium	200.7	0.004	0.003	0.005	0.003	0.002
Calcium	200.7	118	45.3	137	0.500	0.001
Chromium	200.7	0.010	<0.002	<0.002	0.005	0.002
Cobalt	200.7	<0.006	<0.006	<0.006	<0.006	0.006
Copper	200.7	<0.002	<0.002	<0.002	<0.002	0.002
Iron	200.7	0.656	0.721	0.727	0.008	0.005
Lead	239.2	<0.001	<0.001	<0.001	<0.001	0.001
Magnesium	200.7	86.7	73.9	97.1	0.087	0.001
Manganese	200.7	8.67	<0.001	11.5	0.009	0.001
Mercury	245.1	<0.0002	<0.0002	<0.0002	<0.0002	0.0002
Nickel	200.7	0.062	<0.002	0.071	<0.002	0.002
Potassium	200.7	17.0	18.0	15.5	0.195	0.051
Selenium	270.2	<0.001	0.0033	<0.001	<0.001	0.001
Silver	200.7	<0.002	0.006	<0.002	<0.002	0.002
Sodium	200.7	208	568	227	<0.100	0.100
Thallium	279.2	<0.001	<0.001	<0.001	<0.001	0.001
Vanadium	200.7	<0.003	<0.003	<0.003	<0.003	0.003
Zinc	200.7	0.216	0.008	0.349	<0.002	0.002

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INORGANICS DATA REPORTING SHEET

Versar

Date Sampled:	N/A	**ICP Analysis Date:**	12/17/98
Date Received:	N/A	**Mercury Analysis Date:**	11/6/98
Project:	PACOE Pedricktown	**GFAA Analysis Date:**	1/19/99

Client ID:		BLANK	LCS		
Lab ID		BLK 1209	LCS 1209		
Matrix		Water	Water		
Unit		(mg/L)	(mg/L)		
Parameter	**Method**			% Recovery	**RL**
Aluminum	200.7	<0.007	0.203	102	0.007
Antimony	200.7	<0.019	0.211	106	0.019
Arsenic	206.2	<0.010	0.023	115	0.010
Barium	200.7	<0.001	0.203	102	0.001
Beryllium	200.7	<0.001	0.205	103	0.001
Cadmium	200.7	<0.002	0.208	104	0.002
Calcium	200.7	0.572	0.216	108	0.001
Chromium	200.7	<0.002	0.194	97	0.002
Cobalt	200.7	<0.006	0.200	100	0.006
Copper	200.7	<0.002	0.203	102	0.002
Iron	200.7	<0.005	0.189	95	0.005
Lead	239.2	<0.001	0.021	105	0.001
Magnesium	200.7	0.047	0.232	116	0.001
Manganese	200.7	<0.001	0.203	102	0.001
Mercury	245.1	<0.0002	0.0045	90	0.0002
Nickel	200.7	<0.002	0.206	103	0.002
Potassium	200.7	0.099	1.01	101	0.051
Selenium	270.2	<0.001	0.020	100	0.001
Silver	200.7	<0.002	0.050	100	0.002
Sodium	200.7	<0.100	0.205	103	0.100
Thallium	279.2	<0.001	0.020	100	0.001
Vanadium	200.7	<0.003	0.201	101	0.003
Zinc	200.7	0.006	0.205	103	0.002

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INORGANICS DATA REPORTING SHEET
Prepared for:
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By:
Envirosystems, Inc.

				CYANIDE
			Method:	9010
			Analysis Date:	11/16/98
			Units:	mg/L
Client ID	**Lab ID**	**Date Samp.**	**Date Rec.**	
INLET 102698	98112750	10/26/98	11/3/98	<0.010
Lab Blank				<0.010
Blank Spike (LCS)				0.092
Spike Recovery				92%

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INORGANICS DATA REPORTING SHEET
Prepared for:
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By:
Envirosystems, Inc.

				CYANIDE
			Method:	9010
			Analysis Date:	11/16/98
			Units:	mg/L
Client ID	Lab ID	Date Samp.	Date Rec.	
MIX 1112	98112883	11/12/98	11/13/98	<0.010
WEIR 1112	98112884	11/12/98	11/13/98	<0.010
BG 1112	98112885	11/12/98	11/13/98	<0.010
WEIR 1109	98112886	11/9/98	11/13/98	<0.010
MIX 1109	98112887	11/9/98	11/13/98	<0.010
MIX 110598	98112888	11/9/98	11/13/98	<0.010
INLET 110598	98112889	11/5/98	11/13/98	0.045
WEIR 110598	98112890	11/5/98	11/13/98	<0.010
Lab Blank				<0.010
Blank Spike (LCS)				0.092
Spike Recovery				92%

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INORGANICS DATA REPORTING SHEET
Prepared for:
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By:
Envirosystems, Inc.

				CYANIDE
			Method:	9010
			Analysis Date:	11/16/98
			Units:	mg/L
Client ID	**Lab ID**	**Date Samp.**	**Date Rec.**	
WEIR 1102	98112891	11/2/98	11/13/98	<0.010
INLET 1102	98112892	11/2/98	11/13/98	0.016
MIX 1102	98112893	11/2/98	11/13/98	0.017
Lab Blank				<0.010
Blank Spike (LCS)				0.092
Spike Recovery				92%

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INORGANICS DATA REPORTING SHEET
Prepared for:
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By:
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				CYANIDE
			Method:	9010
			Analysis Date:	11/30/98
			Units:	mg/L
Client ID	Lab ID	Date Samp.	Date Rec.	
BG 1116	98113052	11/16/98	11/30/98	<0.010
WEIR 1116	98113053	11/16/98	11/30/98	<0.010
MIX 1116	98113054	11/16/98	11/30/98	<0.010
BG 1119	98113055	11/19/98	11/30/98	<0.010
WEIR 1119	98113056	11/19/98	11/30/98	<0.010
MIX 1119	98113057	11/19/98	11/30/98	<0.010
WEIR 1124	98113058	11/24/98	11/30/98	<0.010
EB 112598	98113059	11/25/98	11/30/98	<0.010
Lab Blank				<0.010
Blank Spike (LCS)				0.086
Spike Recovery				86%

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INORGANICS DATA REPORTING SHEET

Versar

Date Sampled:	11/3/98	**ICP Analysis Date:**	11/20/98
Date Received:	11/3/98	**Mercury Analysis Date:**	11/6/98
Project:	PACOE Pedricktown	**GFAA Analysis Date:**	11/20/98

Client ID:		MIX 1102	WEIR 1102	BG 102998	MIX 102998	
Lab ID		98112752	98112753	98112754	98112756	
Matrix		Dissolved	Dissolved	Dissolved	Dissolved	
Unit		(mg/L)	(mg/L)	(mg/L)	(mg/L)	
Parameter	**Method**					**RL**
Aluminum	200.7	0.488	0.166	1.80	0.613	0.007
Antimony	200.7	<0.019	<0.019	<0.019	<0.019	0.019
Arsenic	206.2	<0.010	<0.010	<0.010	<0.010	0.010
Barium	200.7	0.044	0.045	0.041	0.042	0.001
Beryllium	200.7	<0.001	<0.001	<0.001	<0.001	0.001
Cadmium	200.7	<0.002	<0.002	0.015	0.003	0.002
Calcium	200.7	82.0	147	45.4	37.6	0.001
Chromium	200.7	<0.002	<0.002	<0.002	<0.002	0.002
Cobalt	200.7	<0.006	<0.006	<0.006	<0.006	0.006
Copper	200.7	0.040	0.008	0.014	0.014	0.002
Iron	200.7	0.493	0.135	2.05	2.60	0.005
Lead	239.2	<0.001	<0.001	0.003	0.001	0.001
Magnesium	200.7	66.5	91.2	71.3	43.1	0.001
Manganese	200.7	2.61	4.91	<0.001	0.390	0.001
Mercury	245.1	<0.0002	<0.0002	<0.0002	<0.0002	0.0002
Nickel	200.7	0.024	0.047	0.006	0.006	0.002
Potassium	200.7	15.3	16.5	21.6	13.8	0.051
Selenium	270.2	0.0012	<0.001	0.0014	<0.001	0.001
Silver	200.7	<0.002	<0.002	<0.002	<0.002	0.002
Sodium	200.7	370	379	661	445	0.100
Thallium	279.2	<0.001	<0.001	<0.001	<0.001	0.001
Vanadium	200.7	<0.003	<0.003	<0.003	<0.003	0.003
Zinc	200.7	0.187	0.375	0.026	0.087	0.002

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Versar

Date Sampled:	11/3/98	**ICP Analysis Date:**	11/20/98
Date Received:	11/3/98	**Mercury Analysis Date:**	11/6/98
Project:	PACOE Pedricktown	**GFAA Analysis Date:**	11/20/98

Client ID:		WEIR 102998	BLANK	LCS		
Lab ID		98112757	BLK 1105	LCS 1105		
Matrix		Dissolved	Water	Water		
Unit		(mg/L)	(mg/L)	(mg/L)		
Parameter	**Method**				% Recovery	**RL**
Aluminum	200.7	0.295	<0.007	0.211	106	0.007
Antimony	200.7	<0.019	<0.019	0.215	108	0.019
Arsenic	206.2	<0.010	<0.010	0.018	90	0.010
Barium	200.7	0.024	<0.001	0.201	101	0.001
Beryllium	200.7	<0.001	<0.001	0.204	102	0.001
Cadmium	200.7	0.005	<0.002	0.207	104	0.002
Calcium	200.7	140	0.283	0.203	102	0.001
Chromium	200.7	<0.002	<0.002	0.187	94	0.002
Cobalt	200.7	<0.006	<0.006	0.194	97	0.006
Copper	200.7	0.018	<0.002	0.187	94	0.002
Iron	200.7	0.305	0.015	0.211	106	0.005
Lead	239.2	<0.001	<0.001	0.020	100	0.001
Magnesium	200.7	69.5	0.031	0.224	112	0.001
Manganese	200.7	3.96	<0.001	0.199	100	0.001
Mercury	245.1	<0.0002	<0.0002	0.0047	94	0.0002
Nickel	200.7	0.048	<0.002	0.202	101	0.002
Potassium	200.7	12.5	0.086	0.901	90	0.051
Selenium	270.2	<0.001	<0.001	0.020	100	0.001
Silver	200.7	<0.002	<0.002	0.051	102	0.002
Sodium	200.7	286	<0.100	0.202	101	0.100
Thallium	279.2	<0.001	<0.001	0.018	90	0.001
Vanadium	200.7	0.007	<0.003	0.200	100	0.003
Zinc	200.7	0.518	<0.002	0.201	101	0.002

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INORGANICS DATA REPORTING SHEET

Versar

Date Sampled:	11/12/98	**ICP Analysis Date:**	11/20/98
Date Received:	11/13/98	**Mercury Analysis Date:**	11/18/98
Project:	PACOE Pedricktown	**GFAA Analysis Date:**	11/20/98

Client ID:		MIX 1112	WEIR 1112	BG 1112	WEIR 1109	
Lab ID		98112883	98112884	98112885	98112886	
Matrix		Dissolved	Dissolved	Dissolved	Dissolved	
Unit		(mg/L)	(mg/L)	(mg/L)	(mg/L)	
Parameter	**Method**					**RL**
Aluminum	200.7	1.68	0.656	0.139	0.893	0.007
Antimony	200.7	<0.019	<0.019	<0.019	<0.019	0.019
Arsenic	206.2	<0.010	<0.010	<0.010	<0.010	0.010
Barium	200.7	0.067	0.101	0.031	0.133	0.001
Beryllium	200.7	<0.001	<0.001	<0.001	<0.001	0.001
Cadmium	200.7	<0.002	<0.002	<0.002	<0.002	0.002
Calcium	200.7	175	115	50.8	114	0.001
Chromium	200.7	<0.002	0.005	<0.002	<0.002	0.002
Cobalt	200.7	<0.006	<0.006	<0.006	<0.006	0.006
Copper	200.7	0.046	<0.002	0.007	0.011	0.002
Iron	200.7	2.36	0.762	0.126	1.52	0.005
Lead	239.2	<0.001	<0.001	<0.001	<0.001	0.001
Magnesium	200.7	69.5	77.9	87.1	77.8	0.001
Manganese	200.7	3.21	6.59	<0.001	8.37	0.001
Mercury	245.1	<0.0002	<0.0002	<0.0002	<0.0002	0.0002
Nickel	200.7	0.030	0.044	0.006	0.057	0.002
Potassium	200.7	19.4	17.3	24.9	14.0	0.051
Selenium	270.2	0.0012	<0.001	0.004	<0.001	0.001
Silver	200.7	<0.002	<0.002	<0.002	<0.002	0.002
Sodium	200.7	454	423	890	418	0.100
Thallium	279.2	<0.001	<0.001	<0.001	<0.001	0.001
Vanadium	200.7	<0.003	<0.003	<0.003	<0.003	0.003
Zinc	200.7	0.135	0.263	0.021	0.194	0.002

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INORGANICS DATA REPORTING SHEET

Versar

Date Sampled:	11/5/98	**ICP Analysis Date:**	11/20/98
Date Received:	11/13/98	**Mercury Analysis Date:**	11/18/98
Project:	PACOE Pedricktown	**GFAA Analysis Date:**	11/20/98

Client ID:		MIX 1109	MIX 110598	INLET 110598	WEIR 110598	
Lab ID		98112887	98112888	98112889	98112890	
Matrix		Dissolved	Dissolved	Dissolved	Dissolved	
Unit		(mg/L)	(mg/L)	(mg/L)	(mg/L)	
Parameter	**Method**					**RL**
Aluminum	200.7	0.273	0.314	0.387	0.480	0.007
Antimony	200.7	<0.019	<0.019	<0.019	<0.019	0.019
Arsenic	206.2	<0.010	<0.010	<0.010	<0.010	0.010
Barium	200.7	0.032	0.044	0.267	0.096	0.001
Beryllium	200.7	<0.001	<0.001	<0.001	<0.001	0.001
Cadmium	200.7	<0.002	<0.002	<0.002	<0.002	0.002
Calcium	200.7	44.7	58.4	101	117	0.001
Chromium	200.7	<0.002	<0.002	0.003	<0.002	0.002
Cobalt	200.7	<0.006	<0.006	<0.006	<0.006	0.006
Copper	200.7	0.011	0.004	0.018	0.035	0.002
Iron	200.7	0.282	0.344	3.66	0.596	0.005
Lead	239.2	<0.001	<0.001	<0.001	<0.001	0.001
Magnesium	200.7	64.5	55.1	75.4	79.3	0.001
Manganese	200.7	0.042	1.68	9.96	7.78	0.001
Mercury	245.1	<0.0002	<0.0002	<0.0002	<0.0002	0.0002
Nickel	200.7	0.005	0.013	0.046	0.055	0.002
Potassium	200.7	19.2	14.5	14.3	15.3	0.051
Selenium	270.2	0.0014	0.0012	0.0023	<0.001	0.001
Silver	200.7	<0.002	<0.002	<0.002	<0.002	0.002
Sodium	200.7	678	449	454	344	0.100
Thallium	279.2	<0.001	<0.001	<0.001	<0.001	0.001
Vanadium	200.7	<0.003	<0.003	<0.003	<0.003	0.003
Zinc	200.7	0.015	0.064	0.019	0.251	0.002

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INORGANICS DATA REPORTING SHEET

Versar

Date Sampled:	N/A	**ICP Analysis Date:**	11/20/98
Date Received:	N/A	**Mercury Analysis Date:**	11/18/98
Project:	PACOE Pedricktown	**GFAA Analysis Date:**	11/20/98

Client ID:		BLANK	LCS		
Lab ID		BLK 1117	LCS 1117		
Matrix		Water	Water		
Unit		(mg/L)	(mg/L)		
Parameter	**Method**			% Recovery	**RL**
Aluminum	200.7	0.011	0.223	112	0.007
Antimony	200.7	<0.019	0.217	109	0.019
Arsenic	206.2	<0.010	0.022	110	0.001
Barium	200.7	<0.001	0.190	95	0.001
Beryllium	200.7	<0.001	0.204	102	0.001
Cadmium	200.7	<0.002	0.204	102	0.002
Calcium	200.7	0.657	0.196	98	0.001
Chromium	200.7	<0.002	0.194	97	0.002
Cobalt	200.7	<0.006	0.198	99	0.006
Copper	200.7	<0.002	0.199	100	0.002
Iron	200.7	0.017	0.22	110	0.005
Lead	239.2	<0.001	0.020	100	0.001
Magnesium	200.7	0.030	0.208	104	0.001
Manganese	200.7	<0.001	0.200	100	0.001
Mercury	245.1	<0.0002	0.0043	86	0.0002
Nickel	200.7	<0.002	0.205	103	0.002
Potassium	200.7	0.062	0.934	93	0.051
Selenium	270.2	<0.001	0.020	100	0.001
Silver	200.7	<0.002	0.052	104	0.002
Sodium	200.7	<0.100	0.229	115	0.100
Thallium	279.2	<0.001	0.018	90	0.001
Vanadium	200.7	<0.003	0.203	102	0.003
Zinc	200.7	<0.002	0.196	98	0.002

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INORGANICS DATA REPORTING SHEET

Versar

Date Sampled: 11/16/98
Date Received: 11/30/98
Project: PACOE Pedricktown

ICP Analysis Date: 12/17/98
Mercury Analysis Date: 11/6/98
GFAA Analysis Date: 1/19/99

Client ID:		BG 1116	WEIR 1116	MIX 1116	BG 1119	
Lab ID		98113052	98113053	98113054	98113055	
Matrix		Dissolved	Dissolved	Dissolved	Dissolved	
Unit		(mg/L)	(mg/L)	(mg/L)	(mg/L)	
Parameter	**Method**					**RL**
Aluminum	200.7	0.057	0.126	0.051	0.084	0.007
Antimony	200.7	<0.019	0.025	<0.019	<0.019	0.019
Arsenic	206.2	<0.010	<0.010	<0.010	<0.010	0.010
Barium	200.7	0.033	0.084	0.032	0.038	0.001
Beryllium	200.7	<0.001	<0.001	<0.001	<0.001	0.001
Cadmium	200.7	<0.002	0.004	<0.002	0.004	0.002
Calcium	200.7	53.1	117	44.0	56.1	0.001
Chromium	200.7	<0.002	<0.002	<0.002	0.009	0.002
Cobalt	200.7	<0.006	<0.006	<0.006	<0.006	0.006
Copper	200.7	<0.002	0.003	<0.002	<0.002	0.002
Iron	200.7	0.027	0.285	0.058	0.034	0.005
Lead	239.2	<0.001	<0.001	<0.001	<0.001	0.001
Magnesium	200.7	101	84.4	64.7	114	0.001
Manganese	200.7	<0.001	6.91	0.181	<0.001	0.001
Mercury	245.1	<0.0002	<0.0002	<0.0002	<0.0002	0.0002
Nickel	200.7	<0.002	0.059	<0.002	0.007	0.002
Potassium	200.7	28.5	17.5	18.0	31.0	0.051
Selenium	270.2	0.0029	<0.001	0.0016	0.003	0.001
Silver	200.7	<0.002	<0.002	<0.002	0.009	0.002
Sodium	200.7	89.0	232	500	961	0.100
Thallium	279.2	<0.001	<0.001	<0.001	<0.001	0.001
Vanadium	200.7	<0.003	<0.003	<0.003	<0.003	0.003
Zinc	200.7	0.012	0.248	0.018	0.006	0.002

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ENVIROSYSTEMS, INC.

INORGANICS DATA REPORTING SHEET

Versar

Date Sampled:	11/16/98	**ICP Analysis Date:**	12/17/98
Date Received:	11/30/98	**Mercury Analysis Date:**	11/6/98
Project:	PACOE Pedricktown	**GFAA Analysis Date:**	1/19/99

Client ID:		WEIR 1119	MIX 1119	WEIR 1124	EB 112598	
Lab ID		98113056	98113057	98113058	98113059	
Matrix		Dissolved	Dissolved	Dissolved	Dissolved	
Unit		(mg/L)	(mg/L)	(mg/L)	(mg/L)	
Parameter	**Method**					**RL**
Aluminum	200.7	0.099	0.096	0.135	<0.001	0.007
Antimony	200.7	<0.019	<0.019	<0.019	<0.019	0.019
Arsenic	206.2	<0.010	<0.010	<0.010	<0.010	0.010
Barium	200.7	0.082	0.034	0.075	<0.001	0.001
Beryllium	200.7	<0.001	<0.001	<0.001	<0.001	0.001
Cadmium	200.7	<0.002	<0.002	<0.002	<0.002	0.002
Calcium	200.7	113	44.7	134	0.474	0.001
Chromium	200.7	<0.002	<0.002	<0.002	<0.002	0.002
Cobalt	200.7	<0.006	<0.006	<0.006	<0.006	0.006
Copper	200.7	0.046	<0.002	0.007	<0.002	0.002
Iron	200.7	0.284	0.060	0.292	<0.005	0.005
Lead	239.2	<0.001	<0.001	<0.001	<0.001	0.001
Magnesium	200.7	83.4	73.1	95.1	0.053	0.001
Manganese	200.7	8.67	<0.001	12.2	0.005	0.001
Mercury	245.1	<0.0002	<0.0002	<0.0002	<0.0002	0.0002
Nickel	200.7	0.051	0.044	0.078	<0.002	0.002
Potassium	200.7	18.0	20.6	17.7	0.175	0.051
Selenium	270.2	<0.001	0.0017	<0.001	<0.001	0.001
Silver	200.7	<0.002	<0.002	<0.002	<0.002	0.002
Sodium	200.7	242	581	242	0.378	0.100
Thallium	279.2	<0.001	<0.001	<0.001	<0.001	0.001
Vanadium	200.7	<0.003	<0.003	<0.003	<0.003	0.003
Zinc	200.7	0.203	0.009	0.333	<0.002	0.002

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APPENDIX B

Pedricktown North Confined Disposal Facility Volatile Organics, Semi-Volatile Organics, and Pesticides Laboratory Results

KEMRON ENVIRON[illegible]TAL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9810411-01
Client Sample ID: INLET 101598/WATER
Site/Work ID: PEDERICKTON
Matrix: Water

Dil. Type: N/A
COC Info: N/A

Sample Weight: N/A
Extract Volume: N/A

Date Collected: 10/15/98

% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/21/98
Analysis Date: 10/25/98 Time:

Instrument: HP9
Analyst: ECL
Lab File ID: 971

Method: 8081A\3510C
Run ID: R54908
Batch : WG48292

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L		ND	0.06	1.2
319-85-7	beta-BHC	ug/L		ND	0.06	1.2
319-86-8	delta-BHC	ug/L		ND	0.06	1.2
58-89-9	gamma-BHC (Lindane)	ug/L		ND	0.06	1.2
76-44-8	Heptachlor	ug/L		ND	0.06	1.2
309-00-2	Aldrin	ug/L		ND	0.06	1.2
1024-57-3	Heptachlor epoxide	ug/L		ND	0.06	1.2
959-98-8	Endosulfan I	ug/L		ND	0.06	1.2
60-57-1	Dieldrin	ug/L		ND	0.12	1.2
72-55-9	4,4'-DDE	ug/L	0.056	J	0.12	1.2
72-20-8	Endrin	ug/L		ND	0.12	1.2
33213-65-9	Endosulfan II	ug/L		ND	0.12	1.2
72-54-8	4,4'-DDD	ug/L	0.48		0.12	1.2
1031-07-8	Endosulfan sulfate	ug/L		ND	0.12	1.2
50-29-3	4,4'-DDT	ug/L	0.056	J	0.12	1.2
72-43-5	Methoxychlor	ug/L		ND	0.60	1.2
53494-70-5	Endrin ketone	ug/L		ND	0.12	1.2
7421-93-4	Endrin aldehyde	ug/L		ND	0.12	1.2
5103-71-9	alpha Chlordane	ug/L		ND	0.06	1.2
5103-74-2	gamma Chlordane	ug/L		ND	0.06	1.2
8001-35-2	Toxaphene	ug/L		ND	1.2	1.2

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	15.2	(13 - 154%)
Decachlorobiphenyl	36.0	(25 - 140%)

RL = Reporting Limit

Login #L9810411
November 3, 1998 02:49 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9810411-01
Client Sample ID: INLET 101598/WATER
Site/Work ID: PEDERICKTON
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 10/22/98
Analysis Date: 10/24/98 Time: 16:34

Dil. Type: N/A
COC Info: N/A

Date Collected: 10/15/98

Instrument: HPMS3
Analyst: MDC
Lab File ID: 14779

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8270C\3510C
Run ID: R55194
Batch : WG48211

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L		ND	15	2.9
111-44-4	Bis(2-Chloroethyl)ether	ug/L		ND	15	2.9
95-57-8	2-Chlorophenol	ug/L		ND	15	2.9
541-73-1	1,3-Dichlorobenzene	ug/L		ND	15	2.9
106-46-7	1,4-Dichlorobenzene	ug/L		ND	15	2.9
95-50-1	1,2-Dichlorobenzene	ug/L		ND	15	2.9
95-48-7	2-Methylphenol	ug/L		ND	15	2.9
108-60-1	bis(2-Chloroisopropyl)ether	ug/L		ND	15	2.9
106-44-5	4-Methylphenol	ug/L		ND	15	2.9
621-64-7	N-Nitroso-di-n-propylamine	ug/L		ND	15	2.9
67-72-1	Hexachloroethane	ug/L		ND	15	2.9
98-95-3	Nitrobenzene	ug/L		ND	15	2.9
78-59-1	Isophorone	ug/L		ND	15	2.9
88-75-5	2-Nitrophenol	ug/L		ND	15	2.9
105-67-9	2,4-Dimethylphenol	ug/L		ND	15	2.9
111-91-1	Bis(2-Chloroethoxy)Methane	ug/L		ND	15	2.9
120-83-2	2,4-Dichlorophenol	ug/L		ND	15	2.9
120-82-1	1,2,4-Trichlorobenzene	ug/L		ND	15	2.9
91-20-3	Naphthalene	ug/L		ND	15	2.9
106-47-8	4-Chloroaniline	ug/L		ND	15	2.9
87-68-3	Hexachlorobutadiene	ug/L		ND	15	2.9
59-50-7	4-Chloro-3-methylphenol	ug/L		ND	15	2.9
91-57-6	2-Methylnaphthalene	ug/L		ND	15	2.9
77-47-4	Hexachlorocyclopentadiene	ug/L		ND	15	2.9
88-06-2	2,4,6-Trichlorophenol	ug/L		ND	15	2.9
95-95-4	2,4,5-Trichlorophenol	ug/L		ND	73	2.9
91-58-7	2-Chloronaphthalene	ug/L		ND	15	2.9
88-74-4	2-Nitroaniline	ug/L		ND	73	2.9
131-11-3	Dimethylphthalate	ug/L		ND	15	2.9
208-96-8	Acenaphthylene	ug/L		ND	15	2.9
606-20-2	2,6-Dinitrotoluene	ug/L		ND	15	2.9
99-09-2	3-Nitroaniline	ug/L		ND	73	2.9
83-32-9	Acenaphthene	ug/L		ND	15	2.9
51-28-5	2,4-Dinitrophenol	ug/L		ND	73	2.9
100-02-7	4-Nitrophenol	ug/L		ND	73	2.9
132-64-9	Dibenzofuran	ug/L		ND	15	2.9
121-14-2	2,4-Dinitrotoluene	ug/L		ND	15	2.9
84-66-2	Diethylphthalate	ug/L		ND	15	2.9
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L		ND	15	2.9

L = Reporting Limit

KEMRON Environmental Services
109 Starling Park
Marietta, Ohio 45750
Phone: (740) 373-4071

Versar, Inc.
9200 Rumsey Road
Columbia, MD 21045-1934

Attention: William Burton

PO Number:
Account Number: VERSAR-MD-331

Login #: L9810411
Report Date: 11/03/98
Work ID: PEDERICKTON
Date Received: 10/16/98

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9810411-01	INLET 101598/WATER	L9810411-02	INLET 101598/SEDIMENT

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

Certified By
David L. Bumgarner

KEMRON
ENVIRONMENTAL SERVICES

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9810411-01
.ient Sample ID: INLET 101598/WATER
Site/Work ID: PEDERICKTON

Matrix: Water
Collected: 10/15/98 0915

COC Info: N/A

ıalyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
ʼanide, Total.....	mg/L	0.024		0.01	1	N/A	JWR	10/21/98	09:00	9010B\9014

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9810411-01
:lient Sample ID: INLET 101598/WATER
Site/Work ID: PEDERICKTON
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/15/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

:LP Extract Date: N/A
Extract Date: 10/21/98
Analysis Date: 10/22/98 Time: 20:53

Instrument: HP10
Analyst: CDB
Lab File ID: 068R0101

Method: 8082\3510C
Run ID: R54794
Batch : WG48155

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
ı2674-11-2	Aroclor-1016.....	ug/L		ND	0.60	1.2
ı1104-28-2	Aroclor-1221.....	ug/L		ND	0.60	1.2
ı1141-16-5	Aroclor-1232.....	ug/L		ND	0.60	1.2
ı3469-21-9	Aroclor-1242.....	ug/L		ND	0.60	1.2
ı2672-29-6	Aroclor-1248.....	ug/L		ND	0.60	1.2
ı1097-69-1	Aroclor-1254.....	ug/L		ND	1.2	1.2
ı1096-82-5	Aroclor-1260.....	ug/L		ND	1.2	1.2

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene.....	16.0	(13 - 154%)
Decachlorobiphenyl.....	27.7	(25 - 140%)

, = Reporting Limit

Login #L98104
November 3, 1998 02:49 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9810411-01
Client Sample ID: INLET 101598/WATER
Site/Work ID: PEDERICKTON
Matrix: Water

Dil. Type: N/A
COC Info: N/A

Sample Weight: N/A
Extract Volume: N/A

Date Collected: 10/15/98

% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/22/98
Analysis Date: 10/24/98 Time: 16:34

Instrument: HPMS3
Analyst: MDC
Lab File ID: 14779

Method: 8270C\3510C
Run ID: R55194
Batch : WG48211

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L		ND	15	2.9
100-01-6	4-Nitroaniline	ug/L		ND	73	2.9
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	73	2.9
86-30-6	N-Nitrosodiphenylamine	ug/L		ND	15	2.9
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	15	2.9
118-74-1	Hexachlorobenzene	ug/L		ND	15	2.9
87-86-5	Pentachlorophenol	ug/L		ND	73	2.9
85-01-8	Phenanthrene	ug/L		ND	15	2.9
120-12-7	Anthracene	ug/L		ND	15	2.9
86-74-8	Carbazole	ug/L		ND	15	2.9
84-74-2	Di-N-Butylphthalate	ug/L		ND	15	2.9
206-44-0	Fluoranthene	ug/L		ND	15	2.9
129-00-0	Pyrene	ug/L		ND	15	2.9
85-68-7	Butylbenzylphthalate	ug/L		ND	15	2.9
91-94-1	3,3'-Dichlorobenzidine	ug/L		ND	29	2.9
56-55-3	Benzo(a)anthracene	ug/L		ND	15	2.9
218-01-9	Chrysene	ug/L		ND	15	2.9
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	15	2.9
117-84-0	Di-n-octylphthalate	ug/L		ND	15	2.9
205-99-2	Benzo(b)fluoranthene	ug/L		ND	15	2.9
207-08-9	Benzo(k)fluoranthene	ug/L		ND	15	2.9
50-32-8	Benzo(a)pyrene	ug/L		ND	15	2.9
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L		ND	15	2.9
53-70-3	Dibenzo(a,h)Anthracene	ug/L		ND	15	2.9
191-24-2	Benzo(g,h,i)Perylene	ug/L		ND	15	2.9

SURROGATES- In Percent Recovery:

2-Fluorophenol	10.5	*SMI	(21 - 100%)
Phenol-d5	10.0	SMI	(10 - 94%)
Nitrobenzene-d5	13.0	*SMI	(35 - 114%)
2-Fluorobiphenyl	3.80	*SMI	(43 - 116%)
2,4,6-Tribromophenol	3.70	*SMI	(10 - 123%)
p-Terphenyl-d14	2.90	*SMI	(33 - 141%)

L = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9810411-01
lient Sample ID: INLET 101598/WATER
Site/Work ID: PEDERICKTON
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/15/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

LP Extract Date: N/A
Extract Date: N/A
Analysis Date: 10/28/98 Time: 20:18

Instrument: HPMS6
Analyst: CMS
Lab File ID: 6VE11054

Method: 8260B
Run ID: R55412
Batch : WG48541

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/L		ND	10	1
74-83-9	Bromomethane	ug/L		ND	10	1
75-01-4	Vinyl chloride	ug/L		ND	10	1
75-00-3	Chloroethane	ug/L		ND	10	1
75-09-2	Methylene chloride	ug/L		ND	5.0	1
67-64-1	Acetone	ug/L		ND	10	1
75-15-0	Carbon disulfide	ug/L		ND	5.0	1
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1
75-34-3	1,1-Dichloroethane	ug/L		ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L		ND	5.0	1
67-66-3	Chloroform	ug/L		ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	1
78-93-3	2-Butanone	ug/L		ND	10	1
71-55-6	1,1,1-Trichloroethane	ug/L		ND	5.0	1
56-23-5	Carbon tetrachloride	ug/L		ND	5.0	1
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	1
0061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	1
79-01-6	Trichloroethene	ug/L		ND	5.0	1
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1
71-43-2	Benzene	ug/L		ND	5.0	1
0061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	1
75-25-2	Bromoform	ug/L		ND	5.0	1
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	1
591-78-6	2-Hexanone	ug/L		ND	10	1
127-18-4	Tetrachloroethene	ug/L		ND	5.0	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0	1
108-88-3	Toluene	ug/L		ND	5.0	1
108-90-7	Chlorobenzene	ug/L		ND	5.0	1
100-41-4	Ethyl benzene	ug/L		ND	5.0	1
100-42-5	Styrene	ug/L		ND	5.0	1
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1

SURROGATES- In Percent Recovery:

Dibromofluoromethane	89.8	(86 - 118%)
1,2-Dichloroethane-d4	98.6	(80 - 120%)
Toluene-d8	94.2	(88 - 110%)
p-Bromofluorobenzene	96.4	(86 - 115%)

= Reporting Limit

Lab Sample ID: L9810411-02
Client Sample ID: INLET 101598/SEDIMENT
Site/Work ID: PEDERICKTON

Matrix: Soil
Collected: 10/15/98 0915

% Solid: 26
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids.....	% wt.	26		1.0	1	N/A	DKM	10/27/98	14:20	D2216-90

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9810411-02
Client Sample ID: INLET 101598/SEDIMENT
Site/Work ID: PEDERICKTON
Matrix: Soil

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 10/26/98 Time: 16:43

Dil. Type: N/A
COC Info: N/A

Date Collected: 10/15/98

Instrument: HPMS6
Analyst: CMS
Lab File ID: 6VE10981

Sample Weight: N/A
Extract Volume: N/A

% Solid: 26

Method: 8260B
Run ID: R55205
Batch : WG48389

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane.....	ug/kg		ND	38	1
74-83-9	Bromomethane.....	ug/kg		ND	38	1
75-01-4	Vinyl chloride.....	ug/kg		ND	38	1
75-00-3	Chloroethane.....	ug/kg		ND	38	1
75-09-2	Methylene chloride.....	ug/kg		ND	19	1
67-64-1	Acetone.....	ug/kg	76		38	1
75-15-0	Carbon disulfide.....	ug/kg		ND	19	1
75-35-4	1,1-Dichloroethene.....	ug/kg		ND	19	1
75-34-3	1,1-Dichloroethane.....	ug/kg		ND	19	1
540-59-0	1,2-Dichloroethene (Total).....	ug/kg		ND	19	1
67-66-3	Chloroform.....	ug/kg		ND	19	1
107-06-2	1,2-Dichloroethane.....	ug/kg		ND	19	1
78-93-3	2-Butanone.....	ug/kg		ND	38	1
71-55-6	1,1,1-Trichloroethane.....	ug/kg		ND	19	1
56-23-5	Carbon tetrachloride.....	ug/kg		ND	19	1
75-27-4	Bromodichloromethane.....	ug/kg		ND	19	1
78-87-5	1,2-Dichloropropane.....	ug/kg		ND	19	1
10061-01-5	cis-1,3-Dichloropropene.....	ug/kg		ND	19	1
79-01-6	Trichloroethene.....	ug/kg		ND	19	1
124-48-1	Dibromochloromethane.....	ug/kg		ND	19	1
79-00-5	1,1,2-Trichloroethane.....	ug/kg		ND	19	1
71-43-2	Benzene.....	ug/kg		ND	19	1
10061-02-6	trans-1,3-Dichloropropene.....	ug/kg		ND	19	1
75-25-2	Bromoform.....	ug/kg		ND	19	1

L = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9810411-02
Client Sample ID: INLET 101598/SEDIMENT
Site/Work ID: PEDERICKTON
Matrix: Soil

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/15/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: 26

CLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 10/26/98 Time: 16:43

Instrument: HPMS6
Analyst: CMS
Lab File ID: 6VE10981

Method: 8260B
Run ID: R55205
Batch : WG48389

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
108-10-1	4-Methyl-2-pentanone	ug/kg		ND	38	1
591-78-6	2-Hexanone	ug/kg		ND	38	1
127-18-4	Tetrachloroethene	ug/kg		ND	19	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/kg		ND	19	1
108-88-3	Toluene	ug/kg		ND	19	1
108-90-7	Chlorobenzene	ug/kg		ND	19	1
100-41-4	Ethyl benzene	ug/kg		ND	19	1
100-42-5	Styrene	ug/kg		ND	19	1
1330-20-7	Xylenes, Total	ug/kg		ND	19	1

SURROGATES- In Percent Recovery:

Dibromofluoromethane	50.3	*	(80 - 120%)
1,2-Dichloroethane-d4	52.6	*	(80 - 120%)
Toluene-d8	47.0	*	(81 - 117%)
p-Bromofluorobenzene	36.6	*	(74 - 121%)

, = Reporting Limit

Order #: 98-10-411
November 3, 1998 02:49 pm

KEMRON ENVIRONMENTAL SERVICES
WORK GROUPS

Work Group	Run ID	Sample	Dil Type	Matrix	Product	Method	Analyst	Date Collected	Run Date	Run Time	Department
WG48068	R54908	L9810411-01		Water	Organochlorine Pesticides	8081A\3510C	ECL	15-OCT-1998	25-OCT-1998		Extraction
WG48069	R54794	L9810411-01		Water	PCB's (Water)	8082\3510C	CDB	15-OCT-1998	22-OCT-1998	20:53	Extraction
WG48090	R54652	L9810411-01		Water	Cyanide, Total	9010B\9014	JWR	15-OCT-1998	21-OCT-1998	09:00	Conventionals
WG48124	R55194	L9810411-01		Water	TCL Semivolatiles	8270C\3510C	MDC	15-OCT-1998	24-OCT-1998	16:34	Extraction
WG48155	R54794	L9810411-01		Water	PCB's (Water)	8082\3510C	CDB	15-OCT-1998	22-OCT-1998	20:53	Semivolatile - GC
WG48211	R55194	L9810411-01		Water	TCL Semivolatiles	8270C\3510C	MDC	15-OCT-1998	24-OCT-1998	16:34	Semivolatile - GC/MS
WG48292	R54908	L9810411-01		Water	Organochlorine Pesticides	8081A\3510C	ECL	15-OCT-1998	25-OCT-1998		Semivolatile - GC
WG48389	R55205	L9810411-02		Soil	TCL Volatiles	8260B	CMS	15-OCT-1998	26-OCT-1998	16:43	Volatile - GC/MS
WG48432	R55083	L9810411-02		Soil	Percent Solids	D2216-90	DKM	15-OCT-1998	27-OCT-1998	14:20	Conventionals
WG48541	R55412	L9810411-01		Water	TCL Volatiles	8260B	CMS	15-OCT-1998	28-OCT-1998	20:18	Volatile - GC/MS

KEMRON ANALYST LIST

Ohio Valley Laboratory

10/28/98

ALC - - Ann L. Clark
BAD - - Becky A. Diehl
CEB - - Chad E. Barnes
CDB - - Christy D. Burton
CLH - - Chris L. Hurst
CMS - - Crystal M. Stevens
CRC - - Carla R. Cochran
DIH - - Deanna I. Hesson
DKM - - Dewey K. Miller
DLN - - Deanna L. Norton
DLP - - Dorothy L. Payne
ECL - - Eric C. Lawson
FEH - - Fay E. Harmon
HV - - Hema Vilasagar
JLH - - Janice L. Holland
JWR - - John W. Richards
JYH - - Ji Y. Hu
KHA - - Kim H. Archer
KMS - - Kevin M. Stutler
KRA - - Kathy R. Albertson
MDA - - Mike D. Albertson
MDC - - Michael D. Cochran
MES - - Mary E. Schiling
MLS - - Michael L. Schimmel
MMB - - Maren M. Beery
RDC - - Rebecca D. Cutlip
RDS - - Rebecca D. Sutton
REF - - Ron E. Fertile
REK - - Robert E. Kyer
RSS - - Regina S. Simmons
RWC - - Rodney W. Campbell
SJK - - Sindy J. Kinney
SJM - - Shawn J. Marshall
SLP - - Sheri L. Pfalzgraf
SLT - - Stephanie L. Tepe
SMW - - Shauna M. Welch
SPL - - Steve P. Learn
TJW - - Thomas J. Ware
TRS - - Todd R. Stack
VC - - Vicki Collier
VMN - - Vincent M. Nedeff

KEMRON Environmental Services, Inc.
LIST OF VALID QUALIFIERS (qual)
March 9, 1998

Qualifier	Description
(A)	See the report narrative
(B)	See the report narrative
(C)	See the report narrative
+	Correlation coefficient for the MSA is less than 0.995
<	Less than
>	Greater than
B	Present in the method blank
C	Confirmed by GC/MS
*	Surrogate or spike compound out of range
CG	Confluent growth
D	The analyte was quantified at a secondary dilution factor
DL	Surrogate or spike was diluted out
E	Estimated concentration due to sample matrix interference
F	Present below nominal reporting limit (AFCEE only)
FL	Free liquid
I	Semiquantitative result, out of instrument calibration range
J	Present below nominal reporting limit
L	Sample reporting limits elevated due to matrix interference
M	Duplicate injection precision not met

Qualifier	Description
N	Tentatively Identified Compound (TIC)
NA	Not applicable
ND	Not detected at or above the reporting limit (RL)
NF	Not found
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentration > 25% difference between the two GC columns
QNS	Quantity not sufficient to perform analysis
R	Analyte exceeds regulatory limit
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TNTC	Too numerous to count
U	Analyzed for but not detected
W	Post-digestion spike for furnace AA out of control limits
X	Can not be resolved from isomer. See below.

Special Notes for Organic Analytes

1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

ORGANIC QA/QC

KEMRON
ENVIRONMENTAL SERVICES

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG48389	Run Date:	10/26/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_6	SMPL Num:	10-465-07	SMPL DF:	1
Matrix:	Soil	BLK FLNM:	6BK10970	SMPL FLNM:	6VE10982	MS DF:	1
Units:	ug/kg	BLK2 FLNM:	NA	MS FLNM:	6VE10993.D	MSD DF:	1
		LCS FLNM:	6QC10991.D	MSD FLNM:	6VE10994.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	%	%	%	%	%	%	%	%	%	%
dichlorodifluoromethane	10.0	ND	ND	16.1	NA	20.0	ND	16.6	17.2	20.0	80.5	NA	46.0	152.0	83.2	86.1	46.0	152.0	3.5	20.0
chloromethane	10.0	ND	ND	20.9	NA	20.0	ND	21.5	21.2	20.0	104.4	NA	64.0	140.0	107.5	106.1	64.0	140.0	1.3	20.0
vinyl chloride	10.0	ND	ND	21.3	NA	20.0	ND	21.8	20.7	20.0	106.5	NA	70.0	137.0	109.0	103.7	70.0	137.0	5.0	20.0
bromomethane	10.0	ND	ND	26.1	NA	20.0	ND	26.9	24.9	20.0	130.7	NA	62.0	147.0	134.5	124.5	62.0	147.0	7.7	20.0
chloroethane	10.0	ND	ND	18.9	NA	20.0	ND	20.9	19.9	20.0	94.7	NA	69.0	136.0	104.6	99.5	69.0	136.0	5.0	20.0
trichlorofluoromethane	10.0	ND	ND	19.9	NA	20.0	ND	20.3	20.2	20.0	99.6	NA	70.0	134.0	101.4	101.0	70.0	134.0	0.3	20.0
freon 113	10.0	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	20.0
acetone	100.0	ND	ND	23.5	NA	20.0	4.8	39.9	65.5	20.0	117.5	NA	14.0	171.0	175.6	303.7	14.0	171.0	48.6	20.0
1,1-dichloroethene	5.0	ND	ND	20.3	NA	20.0	ND	20.4	21.3	20.0	101.7	NA	70.0	140.0	102.2	106.4	70.0	140.0	4.1	20.0
iodomethane	10.0	ND	ND	15.5	NA	20.0	ND	14.1	15.6	20.0	77.7	NA	50.0	150.0	70.6	77.9	50.0	150.0	9.8	20.0
methylene chloride	5.0	ND	ND	22.8	NA	20.0	ND	21.1	22.0	20.0	114.0	NA	57.0	146.0	105.3	110.0	57.0	146.0	4.4	20.0
carbon disulfide	5.0	ND	ND	21.5	NA	20.0	ND	19.5	20.2	20.0	107.3	NA	69.0	125.0	97.3	101.1	69.0	125.0	3.8	20.0
acrylonitrile	100.0	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	20.0
trans-1,2-dichloroethene	5.0	ND	ND	21.8	NA	20.0	ND	20.9	21.3	20.0	108.9	NA	75.0	141.0	104.4	106.5	75.0	141.0	2.0	20.0
vinyl acetate	10.0	ND	ND	21.9	NA	20.0	ND	0.0	0.0	20.0	109.6	NA	0	132.0	0.0	0.0	0	132.0	#DIV/0!	20.0
1,1-dichloroethane	5.0	ND	ND	23.9	NA	20.0	ND	21.7	22.0	20.0	119.7	NA	79.0	125.0	108.3	110.0	79.0	125.0	1.6	20.0
2-butanone	100.0	ND	ND	19.0	NA	20.0	ND	18.7	29.6	20.0	94.9	NA	28.0	173.0	93.6	147.8	28.0	173.0	44.9	20.0
2,2-dichloropropane	5.0	ND	ND	21.8	NA	20.0	ND	20.5	20.9	20.0	109.0	NA	69.0	128.0	102.6	104.7	69.0	128.0	2.0	20.0
cis-1,2-dichloroethene	5.0	ND	ND	21.2	NA	20.0	ND	19.4	19.9	20.0	106.0	NA	75.0	125.0	97.0	99.3	75.0	125.0	2.3	20.0
chloroform	5.0	ND	ND	22.8	NA	20.0	ND	21.7	21.8	20.0	114.0	NA	78.0	124.0	108.3	109.0	78.0	124.0	0.7	20.0

Notes and Definitions:

RDL= Reporting Detection Limit
BLK= Method Blank
BLK2= Second Method Blank
LCS= Laboratory Control Sample
LCS2= Second Laboratory Control Sample
SMPL= Sample Results
MS/MSD= Matrix Spike / Matrix Spike Duplicate
LCL= Lower Control Limit
UCL= Upper Control Limit
RPD= Relative Percent Difference

ND= Not Detected
NA= Not Applicable

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG48389	Run Date:	10/26/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_6	SMPL Num:	10-465-07	SMPL DF:	1
Matrix:	Soil	BLK FLNM:	6BK10970	SMPL FLNM:	6VE10982	MS DF:	1
Units:	ug/kg	BLK2 FLNM:	NA	MS FLNM:	6VE10993.D	MSD DF:	1
		LCS FLNM:	6QC10991.D	MSD FLNM:	6VE10994.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	%	%	%	%	%	%	%	%	%	%
bromochloromethane	5.0	ND	ND	20.7	NA	20.0	ND	19.3	20.2	20.0	103.5	NA	78.0	125.0	96.4	101.2	78.0	125.0	4.8	20.0
1,1,1-trichloroethane	5.0	ND	ND	21.6	NA	20.0	ND	21.2	21.4	20.0	108.1	NA	77.0	124.0	106.0	107.1	77.0	124.0	1.1	20.0
1,1-dichloropropene	5.0	ND	ND	22.5	NA	20.0	ND	20.7	21.0	20.0	112.6	NA	85.0	132.0	103.6	105.2	85.0	132.0	1.5	20.0
carbon tetrachloride	5.0	ND	ND	22.2	NA	20.0	ND	21.5	21.0	20.0	111.0	NA	77.0	126.0	107.3	105.2	77.0	126.0	2.0	20.0
1,2-dichloroethane	5.0	ND	ND	23.8	NA	20.0	ND	22.1	23.0	20.0	118.8	NA	75.0	126.0	110.4	114.8	75.0	126.0	3.9	20.0
benzene	5.0	ND	ND	22.3	NA	20.0	ND	21.1	21.0	20.0	111.5	NA	81.0	122.0	105.7	105.0	81.0	122.0	0.7	20.0
trichloroethene	5.0	ND	ND	20.3	NA	20.0	ND	18.5	18.7	20.0	101.7	NA	81.0	123.0	92.4	93.3	81.0	123.0	1.0	20.0
1,2-dichloropropane	5.0	ND	ND	22.5	NA	20.0	ND	20.7	21.4	20.0	112.7	NA	79.0	125.0	103.6	106.8	79.0	125.0	3.1	20.0
bromodichloromethane	5.0	ND	ND	22.5	NA	20.0	ND	20.4	20.5	20.0	112.4	NA	81.0	123.0	101.9	102.6	81.0	123.0	0.7	20.0
dibromomethane	5.0	ND	ND	21.4	NA	20.0	ND	19.6	21.5	20.0	107.1	NA	80.0	126.0	97.8	107.3	80.0	126.0	9.3	20.0
2-chloroethylvinyl-ether	5.0	ND	ND	13.8	NA	20.0	ND	11.9	14.4	20.0	69.2	NA	50.0	151.0	59.6	71.9	50.0	151.0	18.7	20.0
4-methyl-2-pentanone	10.0	ND	ND	17.4	NA	20.0	ND	16.4	21.8	20.0	87.1	NA	38.0	162.0	81.9	109.1	38.0	162.0	28.5	20.0
cis-1,3-dichloropropene	5.0	ND	ND	18.9	NA	20.0	ND	15.5	16.0	20.0	94.7	NA	81.0	124.0	77.4	80.2	81.0	124.0	3.6	20.0
toluene	5.0	ND	ND	23.3	NA	20.0	ND	20.7	20.3	20.0	116.3	NA	80.0	124.0	103.4	101.6	80.0	124.0	1.8	20.0
trans-1,3-dichloropropene	5.0	ND	ND	21.8	NA	20.0	ND	16.8	17.7	20.0	108.8	NA	80.0	122.0	84.2	88.6	80.0	122.0	5.2	20.0
1,1,2-trichloroethane	5.0	ND	ND	22.1	NA	20.0	ND	19.8	21.5	20.0	110.7	NA	79.0	123.0	98.9	107.4	79.0	123.0	8.3	20.0
2-hexanone	10.0	ND	ND	17.1	NA	20.0	ND	14.9	21.2	20.0	85.6	NA	31.0	149.0	74.3	105.8	31.0	149.0	35.0	20.0
1,3-dichloropropane	5.0	ND	ND	22.4	NA	20.0	ND	19.6	21.3	20.0	111.8	NA	79.0	123.0	97.9	106.6	79.0	123.0	8.5	20.0
tetrachloroethene	5.0	ND	ND	21.1	NA	20.0	3.1	18.7	18.4	20.0	105.5	NA	80.0	122.0	78.0	76.6	80.0	122.0	1.5	20.0
dibromochloromethane	5.0	ND	ND	21.4	NA	20.0	ND	18.2	19.1	20.0	106.8	NA	81.0	122.0	91.2	95.6	81.0	122.0	4.7	20.0

Notes and Definitions:

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KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG48389	Run Date:	10/26/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_6	SMPL Num:	10-465-07	SMPL DF:	1
Matrix:	Soil	BLK FLNM:	6BK10970	SMPL FLNM:	6VE10982	MS DF:	1
Units:	ug/kg	BLK2 FLNM:	NA	MS FLNM:	6VE10993.D	MSD DF:	1
		LCS FLNM:	6QC10991.D	MSD FLNM:	6VE10994.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	%	%	%	%	%	%	%	%	%	%
1,2-dibromoethane	5.0	ND	ND	20.7	NA	20.0	ND	17.9	19.8	20.0	103.4	NA	79.0	125.0	89.5	99.0	79.0	125.0	10.0	20.0
chlorobenzene	5.0	ND	ND	21.9	NA	20.0	2.3	16.7	16.5	20.0	109.7	NA	82.0	124.0	72.4	71.2	82.0	124.0	1.4	20.0
1,1,1,2-tetrachloroethane	5.0	ND	ND	21.7	NA	20.0	ND	18.5	18.9	20.0	108.5	NA	80.0	124.0	92.7	94.6	80.0	124.0	2.0	20.0
ethylbenzene	5.0	ND	ND	22.2	NA	20.0	ND	18.1	18.1	20.0	111.2	NA	78.0	127.0	90.3	90.4	78.0	127.0	0.1	20.0
m+p-xylene	5.0	ND	ND	45.1	NA	40.0	ND	35.0	34.6	40.0	112.8	NA	81.0	124.0	87.5	86.4	81.0	124.0	1.3	20.0
o-xylene	5.0	ND	ND	19.0	NA	20.0	ND	15.1	14.7	20.0	94.9	NA	83.0	124.0	75.5	73.4	83.0	124.0	2.9	20.0
styrene	5.0	ND	ND	19.6	NA	20.0	ND	12.5	12.4	20.0	98.1	NA	80.0	122.0	62.5	62.0	80.0	122.0	0.8	20.0
bromoform	5.0	ND	ND	17.4	NA	20.0	ND	13.8	15.1	20.0	86.8	NA	67.0	134.0	68.9	75.3	67.0	134.0	8.9	20.0
isopropylbenzene	5.0	ND	ND	19.4	NA	20.0	ND	15.1	15.2	20.0	97.2	NA	82.0	124.0	75.5	75.9	82.0	124.0	0.6	20.0
1,1,2,2-tetrachloroethane	5.0	ND	ND	21.0	NA	20.0	ND	19.1	18.6	20.0	105.0	NA	71.0	136.0	95.5	93.0	71.0	136.0	2.7	20.0
1,2,3-trichloropropane	5.0	ND	ND	21.4	NA	20.0	ND	19.1	22.4	20.0	106.8	NA	70.0	139.0	95.5	111.8	70.0	139.0	15.7	20.0
trans-1,4-dichloro-2-butene	5.0	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
propyl-benzene	5.0	ND	ND	21.7	NA	20.0	ND	15.7	16.0	20.0	108.6	NA	79.0	124.0	78.4	80.2	79.0	124.0	2.3	20.0
bromobenzene	5.0	ND	ND	20.6	NA	20.0	ND	13.1	13.5	20.0	103.2	NA	80.0	122.0	65.5	67.7	80.0	122.0	3.2	20.0
1,3,5-trimethylbenzene	5.0	ND	ND	22.1	NA	20.0	ND	15.5	15.7	20.0	110.6	NA	82.0	123.0	77.6	78.6	82.0	123.0	1.3	20.0
2-chlorotoluene	5.0	ND	ND	22.7	NA	20.0	ND	15.4	15.3	20.0	113.6	NA	77.0	126.0	77.0	76.3	77.0	126.0	0.9	20.0
4-chlorotoluene	5.0	ND	ND	21.9	NA	20.0	ND	13.1	13.6	20.0	109.5	NA	80.0	124.0	65.5	67.9	80.0	124.0	3.5	20.0
tert-butyl-benzene	5.0	ND	ND	20.3	NA	20.0	ND	14.7	15.3	20.0	101.4	NA	78.0	122.0	73.4	76.5	78.0	122.0	4.1	20.0
1,2,4-trimethylbenzene	5.0	ND	ND	21.8	NA	20.0	ND	14.5	14.7	20.0	109.0	NA	83.0	123.0	72.5	73.3	83.0	123.0	1.0	20.0
sec-butyl-benzene	5.0	ND	ND	21.5	NA	20.0	ND	14.9	15.5	20.0	107.6	NA	80.0	124.0	74.6	77.6	80.0	124.0	3.9	20.0

Notes and Definitions:

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LCL= Lower Control Limit
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KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG48389	Run Date:	10/26/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_6	SMPL Num:	10-465-07	SMPL DF:	1
Matrix:	Soil	BLK FLNM:	6BK10970	SMPL FLNM:	6VE10982	MS DF:	1
Units:	ug/kg	BLK2 FLNM:	NA	MS FLNM:	6VE10993.D	MSD DF:	1
		LCS FLNM:	6QC10991.D	MSD FLNM:	6VE10994.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	%	%	%	%	%	%	%	%	%	%
p-isopropyl-toluene	5.0	ND	ND	20.8	NA	20.0	ND	15.1	14.1	20.0	104.1	NA	77.0	124.0	75.6	70.7	77.0	124.0	6.8	20.0
1,3-dichlorobenzene	5.0	ND	ND	20.9	NA	20.0	ND	10.8	10.9	20.0	104.4	NA	82.0	120.0	54.2	54.3	82.0	120.0	0.1	20.0
1,4-dichlorobenzene	5.0	ND	ND	20.6	NA	20.0	ND	10.5	10.6	20.0	102.9	NA	81.0	121.0	52.5	53.2	81.0	121.0	1.3	20.0
n-butyl-benzene	5.0	ND	ND	22.7	NA	20.0	ND	13.3	13.3	20.0	113.4	NA	81.0	125.0	66.3	66.7	81.0	125.0	0.7	20.0
1,2-dichlorobenzene	5.0	ND	ND	21.1	NA	20.0	ND	10.7	11.0	20.0	105.5	NA	84.0	122.0	53.7	55.0	84.0	122.0	2.3	20.0
,2-dibromo-3-chloropropane	5.0	ND	ND	15.8	NA	20.0	ND	11.6	15.1	20.0	79.2	NA	55.0	155.0	58.0	75.3	55.0	155.0	26.0	20.0
1,2,4-trichlorobenzene	5.0	ND	ND	19.7	NA	20.0	ND	5.8	6.0	20.0	98.7	NA	78.0	124.0	28.9	29.9	78.0	124.0	3.2	20.0
hexachlorobutadiene	5.0	ND	ND	21.8	NA	20.0	ND	10.8	11.4	20.0	108.9	NA	73.0	127.0	54.2	56.8	73.0	127.0	4.7	20.0
napthalene	10.0	ND	ND	17.0	NA	20.0	ND	5.1	6.0	20.0	84.8	NA	56.0	152.0	25.5	30.0	56.0	152.0	16.4	20.0
1,2,3-trichlorobenzene	5.0	ND	ND	20.2	NA	20.0	ND	5.9	6.4	20.0	101.0	NA	76.0	128.0	29.6	32.0	76.0	128.0	7.8	20.0

BLK2= Second Method Blank
LCS= Laboratory Control Sample
LCS2= Second Laboratory Control Sample
SMPL= Sample Results
MS/MSD= Matrix Spike / Matrix Spike Duplicate
LCL= Lower Control Limit
UCL= Upper Control Limit
RPD= Relative Percent Difference

ND= Not Detected
NA= Not Applicable
RDL= Reporting Detection Limit
BLK= Method Blank

KEMR[illegible] ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG48541	Run Date:	10/28/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_6	SMPL Num:	10-367-01	SMPL DF:	1
Matrix:	Water	BLK FLNM:	6BK11038	SMPL FLNM:	6BF11041	MS DF:	1
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	6BF11042.D	MSD DF:	1
		LCS FLNM:	6QC11039.D	MSD FLNM:	6BF11043.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
				LCS Spike						MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
dichlorodifluoromethane	10.0	ND	ND	15.2	NA	20.0	ND	4.9	9.4	20.0	75.9	NA	38.0	148.0	24.4	47.1	60.0	140.0	63.7	20.0
chloromethane	10.0	ND	ND	14.5	NA	20.0	ND	9.7	11.7	20.0	72.7	NA	56.0	132.0	48.5	58.7	D	273.0	19.1	20.0
vinyl chloride	10.0	ND	ND	14.8	NA	20.0	ND	7.6	10.9	20.0	74.1	NA	68.0	125.0	38.2	54.4	D	251.0	34.9	20.0
bromomethane	10.0	ND	ND	20.1	NA	20.0	ND	14.6	16.4	20.0	100.5	NA	55.0	138.0	72.9	82.2	D	242.0	12.0	20.0
chloroethane	10.0	ND	ND	15.2	NA	20.0	ND	9.4	10.8	20.0	75.8	NA	70.0	128.0	47.2	54.2	14.0	230.0	13.9	20.0
trichlorofluoromethane	10.0	ND	ND	18.6	NA	20.0	ND	7.9	12.3	20.0	92.8	NA	70.0	127.0	39.5	61.6	17.0	181.0	43.8	20.0
freon 113	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	70.0	130.0	NA	20.0
acetone	100.0	ND	ND	20.0	NA	20.0	ND	19.5	20.4	20.0	99.8	NA	44.0	114.0	97.7	101.9	70.0	130.0	4.3	20.0
1,1-dichloroethene	5.0	ND	ND	21.1	NA	20.0	ND	10.6	14.7	20.0	105.5	NA	69.0	144.0	52.9	73.6	D	234.0	32.8	20.0
iodomethane	NTC	ND	ND	22.4	NA	20.0	ND	16.6	20.2	20.0	111.9	NA	NA	NA	83.0	100.9	70.0	130.0	19.4	20.0
methylene chloride	5.0	ND	ND	21.5	NA	20.0	ND	19.6	20.0	20.0	107.4	NA	71.0	128.0	98.0	100.2	D	221.0	2.2	20.0
carbon disulfide	5.0	ND	ND	19.9	NA	20.0	ND	9.8	14.7	20.0	99.5	NA	67.0	136.0	49.1	73.3	70.0	130.0	39.5	20.0
acrylonitrile	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	70.0	130.0	NA	20.0
trans-1,2-dichloroethene	5.0	ND	ND	23.0	NA	20.0	ND	15.5	17.8	20.0	115.2	NA	85.0	133.0	77.3	88.9	54.0	156.0	14.0	20.0
vinyl acetate	10.0	ND	ND	36.9	NA	20.0	ND	36.4	38.0	20.0	184.5	NA	9.0	236.0	181.8	190.0	9.0	236.0	4.4	20.0
1,1-dichloroethane	5.0	ND	ND	21.9	NA	20.0	ND	17.6	19.0	20.0	109.4	NA	82.0	124.0	88.0	95.2	59.0	155.0	7.9	20.0
2-butanone	100.0	ND	ND	19.9	NA	20.0	ND	18.6	19.4	20.0	99.6	NA	43.0	140.0	93.0	96.9	70.0	130.0	4.2	20.0
2,2-dichloropropane	5.0	ND	ND	24.6	NA	20.0	ND	15.4	18.5	20.0	122.8	NA	77.0	126.0	76.9	92.3	60.0	140.0	18.1	20.0
cis-1,2-dichloroethene	5.0	ND	ND	22.0	NA	20.0	ND	18.4	19.3	20.0	109.9	NA	69.0	130.0	91.8	96.3	60.0	140.0	4.8	20.0
chloroform	5.0	ND	ND	21.6	NA	20.0	ND	18.8	19.5	20.0	107.9	NA	83.0	121.0	93.9	97.6	51.0	138.0	3.9	20.0

Notes and Definitions:

RDL= Reporting Detection Limit
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LCS2= Second Laboratory Control Sample
SMPL= Sample Results
MS/MSD= Matrix Spike / Matrix Spike Duplicate
LCL= Lower Control Limit
UCL= Upper Control Limit
RPD= Relative Percent Difference

ND= Not Detected
NA= Not Applicable

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG48541	Run Date:	10/28/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_6	SMPL Num:	10-367-01	SMPL DF:	1
Matrix:	Water	BLK FLNM:	6BK11036	SMPL FLNM:	6BF11041	MS DF:	1
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	6BF11042.D	MSD DF:	1
		LCS FLNM:	6QC11039.D	MSD FLNM:	6BF11043.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
	RDL	BLK	BLK2	LCS	LCS2	LCS Spike Level	SMPL	MS	MSD	MS Spike Level	LCS	LCS2	LCS LCL	LCS UCL	MS	MSD	MS LCL	MS UCL	MS RPD	RPD UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
bromochloromethane	5.0	ND	ND	23.0	NA	20.0	ND	21.8	21.9	20.0	114.8	NA	85.0	118.0	108.9	109.7	60.0	140.0	0.7	20.0
1,1,1-trichloroethane	5.0	ND	ND	20.7	NA	20.0	ND	12.7	15.7	20.0	103.4	NA	74.0	125.0	63.3	78.5	52.0	162.0	21.5	20.0
1,1-dichloropropene	5.0	ND	ND	23.4	NA	20.0	ND	13.0	17.1	20.0	117.2	NA	85.0	126.0	65.1	85.4	60.0	140.0	27.0	20.0
carbon tetrachloride	5.0	ND	ND	21.9	NA	20.0	ND	12.1	15.9	20.0	109.6	NA	73.0	129.0	60.3	79.4	70.0	140.0	27.3	20.0
1,2-dichloroethane	5.0	ND	ND	21.0	NA	20.0	ND	20.9	20.8	20.0	105.1	NA	76.0	123.0	104.4	103.9	49.0	155.0	0.4	20.0
benzene	5.0	ND	ND	22.6	NA	20.0	ND	18.0	19.4	20.0	113.0	NA	86.0	118.0	89.8	96.8	37.0	151.0	7.6	20.0
trichloroethene	5.0	ND	ND	19.3	NA	20.0	ND	13.5	15.4	20.0	96.3	NA	82.0	120.0	67.4	76.8	71.0	157.0	13.0	20.0
1,2-dichloropropane	5.0	ND	ND	21.1	NA	20.0	ND	19.3	19.8	20.0	105.6	NA	74.0	126.0	96.5	98.8	D	210.0	2.3	20.0
bromodichloromethane	5.0	ND	ND	22.5	NA	20.0	ND	21.1	21.4	20.0	112.6	NA	74.0	126.0	105.4	107.0	35.0	155.0	1.8	20.0
dibromomethane	5.0	ND	ND	22.4	NA	20.0	ND	22.1	22.3	20.0	111.9	NA	78.0	125.0	110.4	111.7	60.0	140.0	1.2	20.0
2-chloroethylvinyl-ether	10.0	ND	ND	20.4	NA	20.0	ND	20.3	20.0	20.0	101.9	NA	68.0	144.0	101.4	100.0	70.0	130.0	1.4	20.0
4-methyl-2-pentanone	10.0	ND	ND	19.1	NA	20.0	ND	19.2	19.7	20.0	95.5	NA	79.0	127.0	95.8	98.3	70.0	130.0	2.6	20.0
cis-1,3-dichloropropene	5.0	ND	ND	21.6	NA	20.0	ND	20.2	20.5	20.0	107.9	NA	77.0	123.0	101.0	102.6	D	227.0	1.6	20.0
toluene	5.0	ND	ND	22.4	NA	20.0	ND	18.2	19.5	20.0	112.0	NA	83.0	119.0	91.2	97.7	47.0	150.0	6.9	20.0
trans-1,3-dichloropropene	5.0	ND	ND	21.6	NA	20.0	ND	21.5	21.7	20.0	108.1	NA	74.0	124.0	107.6	108.3	17.0	183.0	0.7	20.0
1,1,2-trichloroethane	5.0	ND	ND	22.2	NA	20.0	ND	22.5	22.6	20.0	110.9	NA	72.0	119.0	112.6	112.9	52.0	150.0	0.3	20.0
2-hexanone	10.0	ND	ND	16.9	NA	20.0	ND	17.4	18.3	20.0	84.3	NA	55.0	114.0	87.1	91.4	70.0	130.0	4.8	20.0
1,3-dichloropropane	5.0	ND	ND	21.5	NA	20.0	ND	22.0	21.9	20.0	107.7	NA	73.0	122.0	109.8	109.6	60.0	140.0	0.2	20.0
tetrachloroethene	5.0	ND	ND	21.8	NA	20.0	ND	13.9	16.6	20.0	108.9	NA	82.0	120.0	69.6	83.2	64.0	148.0	17.8	20.0
dibromochloromethane	5.0	ND	ND	21.9	NA	20.0	ND	22.0	22.0	20.0	109.6	NA	72.0	121.0	109.8	110.0	53.0	149.0	0.2	20.0

Notes and Definitions:

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KEMR[illegible] ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG48541	Run Date:	10/28/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_6	SMPL Num:	10-367-01	SMPL DF:	1
Matrix:	Water	BLK FLNM:	6BK11038	SMPL FLNM:	6BF11041	MS DF:	1
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	6BF11042.D	MSD DF:	1
		LCS FLNM:	6QC11039.D	MSD FLNM:	6BF11043.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes.	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
1,2-dibromoethane	5.0	ND	ND	22.7	NA	20.0	ND	22.9	23.1	20.0	113.7	NA	75.0	121.0	114.5	115.4	60.0	140.0	0.8	20.0
chlorobenzene	5.0	ND	ND	22.4	NA	20.0	ND	20.0	20.5	20.0	112.1	NA	83.0	120.0	99.8	102.6	37.0	160.0	2.7	20.0
1,1,1,2-tetrachloroethane	5.0	ND	ND	21.7	NA	20.0	ND	20.4	20.7	20.0	108.6	NA	79.0	118.0	102.0	103.4	60.0	140.0	1.4	20.0
ethylbenzene	5.0	ND	ND	18.9	NA	20.0	ND	14.7	16.0	20.0	94.7	NA	82.0	119.0	73.5	80.1	37.0	162.0	8.7	20.0
m+p-xylene	5.0	ND	ND	44.8	NA	40.0	ND	35.9	38.8	40.0	111.9	NA	81.0	121.0	89.8	97.0	60.0	140.0	7.7	20.0
o-xylene	5.0	ND	ND	22.2	NA	20.0	ND	19.1	20.2	20.0	111.0	NA	81.0	199.0	95.6	100.8	60.0	140.0	5.2	20.0
styrene	5.0	ND	ND	21.8	NA	20.0	ND	20.1	20.4	20.0	109.2	NA	81.0	118.0	100.4	102.2	60.0	140.0	1.8	20.0
bromoform	5.0	ND	ND	19.0	NA	20.0	ND	19.5	19.5	20.0	94.9	NA	68.0	129.0	97.4	97.3	45.0	169.0	0.1	20.0
isopropylbenzene	5.0	ND	ND	22.1	NA	20.0	ND	16.0	18.3	20.0	110.7	NA	81.0	121.0	80.1	91.3	60.0	140.0	13.1	20.0
1,1,2,2-tetrachloroethane	5.0	ND	ND	23.5	NA	20.0	ND	24.1	24.2	20.0	117.6	NA	81.0	137.0	120.3	121.0	46.0	157.0	0.6	20.0
1,2,3-trichloropropane	5.0	ND	ND	21.8	NA	20.0	ND	22.4	22.3	20.0	109.0	NA	72.0	130.0	111.9	111.7	60.0	140.0	0.1	20.0
trans-1,4-dichloro-2-butene	NTC	ND	ND	3.1	NA	20.0	ND	2.3	2.6	20.0	15.4	NA	NA	NA	11.5	12.8	NA	NA	10.3	20.0
propyl-benzene	5.0	ND	ND	21.6	NA	20.0	ND	15.6	17.6	20.0	108.0	NA	69.0	135.0	77.9	88.1	60.0	140.0	12.3	20.0
bromobenzene	5.0	ND	ND	21.7	NA	20.0	ND	20.1	20.4	20.0	108.5	NA	86.0	118.0	100.3	102.1	60.0	140.0	1.8	20.0
1,3,5-trimethylbenzene	5.0	ND	ND	21.7	NA	20.0	ND	16.9	18.4	20.0	108.5	NA	83.0	121.0	84.7	91.9	60.0	140.0	8.2	20.0
2-chlorotoluene	5.0	ND	ND	21.3	NA	20.0	ND	17.7	18.5	20.0	106.4	NA	80.0	126.0	88.3	92.7	60.0	140.0	4.8	20.0
4-chlorotoluene	5.0	ND	ND	21.6	NA	20.0	ND	18.8	19.5	20.0	108.2	NA	80.0	125.0	94.2	97.3	60.0	140.0	3.3	20.0
tert-butyl-benzene	5.0	ND	ND	20.5	NA	20.0	ND	14.2	16.4	20.0	102.3	NA	79.0	114.0	70.8	82.1	60.0	140.0	14.8	20.0
1,2,4-trimethylbenzene	5.0	ND	ND	21.4	NA	20.0	ND	17.9	18.8	20.0	107.2	NA	84.0	121.0	89.3	94.1	60.0	140.0	5.2	20.0
sec-butyl-benzene	5.0	ND	ND	21.4	NA	20.0	ND	13.8	16.6	20.0	107.2	NA	81.0	122.0	69.1	83.2	60.0	140.0	18.6	20.0

Notes and Definitions:

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KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG48541	Run Date:	10/28/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_6	SMPL Num:	10-367-01	SMPL DF:	1
Matrix:	Water	BLK FLNM:	6BK11038	SMPL FLNM:	6BF11041	MS DF:	1
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	6BF11042.D	MSD DF:	1
		LCS FLNM:	6QC11039.D	MSD FLNM:	6BF11043.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
p-isopropyl-toluene	5.0	ND	ND	21.2	NA	20.0	ND	14.6	16.9	20.0	106.0	NA	80.0	119.0	72.9	84.3	80.0	140.0	14.5	20.0
1,3-dichlorobenzene	5.0	ND	ND	21.6	NA	20.0	ND	19.4	19.9	20.0	108.2	NA	85.0	119.0	96.9	99.3	60.0	140.0	2.4	20.0
1,4-dichlorobenzene	5.0	ND	ND	21.3	NA	20.0	ND	19.5	19.8	20.0	106.3	NA	82.0	122.0	97.3	98.8	18.0	190.0	1.5	20.0
n-butyl-benzene	5.0	ND	ND	22.1	NA	20.0	ND	14.5	17.4	20.0	110.5	NA	80.0	125.0	72.6	86.8	60.0	140.0	17.8	20.0
1,2-dichlorobenzene	5.0	ND	ND	22.1	NA	20.0	ND	20.7	21.0	20.0	110.6	NA	86.0	119.0	103.5	105.2	19.0	190.0	1.6	20.0
2-dibromo-3-chloropropan	5.0	ND	ND	18.2	NA	20.0	ND	18.3	19.1	20.0	90.9	NA	66.0	134.0	91.4	95.7	60.0	140.0	4.6	20.0
1,2,4-trichlorobenzene	5.0	ND	ND	19.3	NA	20.0	ND	16.9	18.1	20.0	96.4	NA	78.0	122.0	84.3	90.3	60.0	140.0	6.9	20.0
hexachlorobutadiene	5.0	ND	ND	21.2	NA	20.0	ND	12.0	16.0	20.0	106.2	NA	73.0	125.0	60.1	80.1	60.0	140.0	28.5	20.0
napthalene	10.0	ND	ND	19.8	NA	20.0	ND	19.4	20.5	20.0	98.9	NA	74.0	148.0	97.0	102.3	60.0	140.0	5.3	20.0
1,2,3-trichlorobenzene	5.0	ND	ND	22.8	NA	20.0	ND	20.6	22.2	20.0	114.1	NA	74.0	124.0	102.9	111.1	60.0	140.0	7.7	20.0

BLK2= Second Method Blank
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ANAL WORK GRP : WG48211
METHOD : 8270
MATRIX : WATER
CONCENTRATION UNITS : UG/L
PREP WORK GRP : WG48124

EXT DATE : 10/22/98
BENCH SHEET : V103P59
BLK FLNM : 8284.D"
LCS FLNM: 8285.D"

RUN DATE : 10/23/98
SMPL ID : NA
SMPL FLNM : NA
MS FLNM : NA
MSD FLNM : NA

INSTRUMENT : HPMS5
ANALYST : mdc

ANALYTE	RDL	CONCENTRATION, ug/L BLANK	LCS SPIKE ADDED	LCS	SAMPLE	MS SPIKE ADDED	MS	MSD	PERCENT RECOVERY, % BLANK	LCS	LCS LCL	LCS UCL	SAMPLE	MS	MSD	MS LCL	MS UCL	PERCENT DUP RPD	MSD RPD	RPD UCL	BEYO LIMIT SAMPLE	BLANK	LCS
PYRIDINE	5.0	ND	100	2.8	ND	200	NA	NA	NA	2.8	5	150	NA	NA	NA	5	150	NA	NA	40			L
N-NITROSODIMETHYLAMINE	5.0	ND	100	20.1	ND	200	NA	NA	NA	20.1	5	150	NA	NA	NA	5	150	NA	NA	40			
ANILINE	10.0	ND	100	17.3	ND	200	NA	NA	NA	17.3	5	150	NA	NA	NA	5	150	NA	NA	40			
PHENOL	5.0	ND	100	22.8	ND	200	NA	NA	NA	22.8	5	112	NA	NA	NA	5	112	NA	NA	40			
BIS(2-CHLOROETHYL)ETHER	5.0	ND	100	50.7	ND	200	NA	NA	NA	50.7	12	158	NA	NA	NA	12	158	NA	NA	40			
2-CHLOROPHENOL	5.0	ND	100	47.2	ND	200	NA	NA	NA	47.2	23	134	NA	NA	NA	23	134	NA	NA	40			
1,3-DICHLOROBENZENE	5.0	ND	100	46.3	ND	200	NA	NA	NA	46.3	5	172	NA	NA	NA	5	172	NA	NA	40			
1,4-DICHLOROBENZENE	10.0	ND	100	48.0	ND	200	NA	NA	NA	48.0	20	124	NA	NA	NA	20	124	NA	NA	40			
BENZYL ALCOHOL	5.0	ND	100	37.6	ND	200	NA	NA	NA	37.6	5	150	NA	NA	NA	5	150	NA	NA	40			
1,2-DICHLOROBENZENE	5.0	ND	100	48.2	ND	200	NA	NA	NA	48.2	32	129	NA	NA	NA	32	129	NA	NA	40			
2-METHYLPHENOL	5.0	ND	100	45.4	ND	200	NA	NA	NA	45.4	5	150	NA	NA	NA	5	150	NA	NA	40			
BIS(2-CHLOROISOPROPYL)ETHER	5.0	ND	100	48.0	ND	200	NA	NA	NA	48.0	36	166	NA	NA	NA	36	166	NA	NA	40			
3- & 4-METHYLPHENOL	5.0	ND	100	41.9	ND	200	NA	NA	NA	41.9	5	150	NA	NA	NA	5	150	NA	NA	40			
N-NITROSO-DI-N-PROPYLAMINE	5.0	ND	100	48.4	ND	200	NA	NA	NA	48.4	5	230	NA	NA	NA	5	230	NA	NA	40			
HEXACHLOROETHANE	5.0	ND	100	46.5	ND	200	NA	NA	NA	46.5	40	113	NA	NA	NA	40	113	NA	NA	40			
NITROBENZENE	5.0	ND	100	52.5	ND	200	NA	NA	NA	52.5	35	180	NA	NA	NA	35	180	NA	NA	40			
ISOPHORONE	5.0	ND	100	56.7	ND	200	NA	NA	NA	56.7	21	196	NA	NA	NA	21	196	NA	NA	40			
2-NITROPHENOL	5.0	ND	100	55.0	ND	200	NA	NA	NA	55.0	29	182	NA	NA	NA	29	182	NA	NA	40			
2,4-DIMETHYLPHENOL	5.0	ND	100	47.7	ND	200	NA	NA	NA	47.7	32	119	NA	NA	NA	32	119	NA	NA	40			
BIS(2-CHLOROETHOXY)METHANE	25.0	ND	100	50.1	ND	200	NA	NA	NA	50.1	33	184	NA	NA	NA	33	184	NA	NA	40			
BENZOIC ACID	5.0	ND	100	9.7	ND	200	NA	NA	NA	9.7	5	150	NA	NA	NA	5	150	NA	NA	40			
2,4-DICHLOROPHENOL	5.0	ND	100	51.7	ND	200	NA	NA	NA	51.7	39	135	NA	NA	NA	39	135	NA	NA	40			
1,2,4-TRICHLOROBENZENE	5.0	ND	100	49.5	ND	200	NA	NA	NA	49.5	44	142	NA	NA	NA	44	142	NA	NA	40			
NAPHTHALENE	5.0	ND	100	53.9	ND	200	NA	NA	NA	53.9	21	133	NA	NA	NA	21	133	NA	NA	40			
4-CHLOROANILINE	5.0	ND	100	33.3	ND	200	NA	NA	NA	33.3	5	150	NA	NA	NA	5	150	NA	NA	40			
HEXACHLOROBUTADIENE	10.0	ND	100	51.4	ND	200	NA	NA	NA	51.4	24	116	NA	NA	NA	24	116	NA	NA	40			
4-CHLORO-3-METHYLPHENOL	5.0	ND	100	52.0	ND	200	NA	NA	NA	52.0	22	147	NA	NA	NA	22	147	NA	NA	40			
2-METHYLNAPHTHALENE	5.0	ND	100	49.9	ND	200	NA	NA	NA	49.9	5	150	NA	NA	NA	5	150	NA	NA	40			
HEXACHLOROCYCLOPENTADIENE	5.0	ND	100	39.7	ND	200	NA	NA	NA	39.7	5	150	NA	NA	NA	5	150	NA	NA	40			
2,4,6-TRICHLOROPHENOL	25.0	ND	100	52.0	ND	200	NA	NA	NA	52.0	37	144	NA	NA	NA	37	144	NA	NA	40			
2,4,5-TRICHLOROPHENOL	5.0	ND	100	53.9	ND	200	NA	NA	NA	53.9	5	150	NA	NA	NA	5	150	NA	NA	40			
2-CHLORONAPHTHALENE	25.0	ND	100	52.1	ND	200	NA	NA	NA	52.1	60	118	NA	NA	NA	60	118	NA	NA	40			L
2-NITROANILINE	5.0	ND	100	61.9	ND	200	NA	NA	NA	61.9	5	150	NA	NA	NA	5	150	NA	NA	40			
DIMETHYLPHTHALATE	5.0	ND	100	67.9	ND	200	NA	NA	NA	67.9	5	112	NA	NA	NA	5	112	NA	NA	40			
ACENAPHTHYLENE	5.0	ND	100	52.8	ND	200	NA	NA	NA	52.8	33	145	NA	NA	NA	33	145	NA	NA	40			
2,6-DINITROTOLUENE	5.0	ND	100	64.7	ND	200	NA	NA	NA	64.7	50	158	NA	NA	NA	50	158	NA	NA	40			
3-NITROANILINE	25.0	ND	100	60.0	ND	200	NA	NA	NA	60.0	5	150	NA	NA	NA	5	150	NA	NA	40			
ACENAPHTHENE	5.0	ND	100	54.0	ND	200	NA	NA	NA	54.0	47	145	NA	NA	NA	47	145	NA	NA	40			
2,4-DINITROPHENOL	25.0	ND	100	40.9	ND	200	NA	NA	NA	40.9	5	191	NA	NA	NA	5	191	NA	NA	40			
4-NITROPHENOL	25.0	ND	100	40.3	ND	200	NA	NA	NA	40.3	5	132	NA	NA	NA	5	132	NA	NA	40			
DIBENZOFURAN	5.0	ND	100	55.9	ND	200	NA	NA	NA	55.9	5	150	NA	NA	NA	5	150	NA	NA	40			
2,4-DINITROTOLUENE	5.0	ND	100	90.0	ND	200	NA	NA	NA	90.0	39	139	NA	NA	NA	39	139	NA	NA	40			

NOTES & DEFINITIONS :
NA = NOT APPLICABLE
ND = NOT DETECTED
RDL=REPORTING DETECTION LIMIT
NS = NOT SPIKED

WG48211.XLS

KEMRON ENVIRONMENTAL SERVICES , OVL
SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP : WG48211
METHOD : 8270
MATRIX : WATER
CONCENTRATION UNITS : UG/L
PREP WORK GRP : WG48124

EXT DATE : 10/22/98
BENCH SHEET : V103P59
BLK FLNM : 8284.D"
LCS FLNM: 8285.D"

RUN DATE : 10/23/98
SMPL ID : NA
SMPL FLNM : NA
MS FLNM : NA
MSD FLNM : NA

INSTRUMENT : HPMS5
ANALYST : mdc

ANALYTE	RDL	CONCENTRATION , ug / L							PERCENT RECOVERY , %									PERCENT			BEYO LIMIT		
		BLANK	LCS SPIKE ADDED	LCS	SAMPLE	MS SPIKE ADDED	MS	MSD	BLANK	LCS	LCS LCL	LCS UCL	SAMPLE	MS	MSD	MS LCL	MS UCL	DUP RPD	MSD RPD	RPD UCL	SAMPLE	BLANK	LCS
DIETHYLPHTHALATE	5.0	ND	100	80.2	ND	200	NA	NA	NA	80.2	5	114	NA	NA	NA	5	114	NA	NA	40			
FLUORENE	5.0	ND	100	60.4	ND	200	NA	NA	NA	60.4	25	158	NA	NA	NA	25	158	NA	NA	40			
4-CHLOROPHENYL-PHENYL ETHER	5.0	ND	100	59.2	ND	200	NA	NA	NA	59.2	59	121	NA	NA	NA	59	121	NA	NA	40			
4-NITROANILINE	25.0	ND	100	92.9	ND	200	NA	NA	NA	92.9	5	150	NA	NA	NA	5	150	NA	NA	40			
1,2-DIPHENYLHYDRAZINE *	5.0	ND	100	67.5	ND	200	NA	NA	NA	67.5	5	150	NA	NA	NA	5	150	NA	NA	40			
4,6-DINITRO-2-METHYLPHENOL	25.0	ND	100	79.1	ND	200	NA	NA	NA	79.1	5	181	NA	NA	NA	5	181	NA	NA	40			
N-NITROSODIPHENYLAMINE **	5.0	ND	100	74.2	ND	200	NA	NA	NA	74.2	5	150	NA	NA	NA	5	150	NA	NA	40			
4-BROMOPHENYL-PHENYL ETHER	5.0	ND	100	60.3	ND	200	NA	NA	NA	60.3	53	127	NA	NA	NA	53	127	NA	NA	40			
HEXACHLOROBENZENE	5.0	ND	100	79.2	ND	200	NA	NA	NA	79.2	5	152	NA	NA	NA	5	152	NA	NA	40			
PENTACHLOROPHENOL	25.0	ND	100	93.3	ND	200	NA	NA	NA	93.3	14	176	NA	NA	NA	14	176	NA	NA	40			
PHENANTHRENE	5.0	ND	100	83.2	ND	200	NA	NA	NA	83.2	54	120	NA	NA	NA	54	120	NA	NA	40			
ANTHRACENE	5.0	ND	100	82.4	ND	200	NA	NA	NA	82.4	27	133	NA	NA	NA	27	133	NA	NA	40			
CARBAZOLE	5.0	ND	100	101.6	ND	200	NA	NA	NA	101.6	5	150	NA	NA	NA	5	150	NA	NA	40			
DI-N-BUTYLPHTHALATE	5.0	ND	100	100.9	ND	200	NA	NA	NA	100.9	1	118	NA	NA	NA	1	118	NA	NA	40			
FLUORANTHENE	5.0	ND	100	102.4	ND	200	NA	NA	NA	102.4	26	137	NA	NA	NA	26	137	NA	NA	40			
PYRENE	5.0	ND	100	99.6	ND	200	NA	NA	NA	99.6	52	115	NA	NA	NA	52	115	NA	NA	40			
BUTYLBENZYLPHTHALATE	5.0	ND	100	106.3	ND	200	NA	NA	NA	106.3	5	152	NA	NA	NA	5	152	NA	NA	40			
BENZO(A)ANTHRACENE	10.0	ND	100	99.0	ND	200	NA	NA	NA	99.0	5	262	NA	NA	NA	5	262	NA	NA	40			
3,3'-DICHLOROBENZIDINE	5.0	ND	100	52.7	ND	200	NA	NA	NA	52.7	33	143	NA	NA	NA	33	143	NA	NA	40			
CHRYSENE	5.0	ND	100	107.2	ND	200	NA	NA	NA	107.2	17	168	NA	NA	NA	17	168	NA	NA	40			
BIS(2-ETHYLHEXYL)PHTHALATE	5.0	ND	100	108.5	ND	200	NA	NA	NA	108.5	8	158	NA	NA	NA	8	158	NA	NA	40			
DI-N-OCTYLPHTHALATE	5.0	ND	100	101.7	ND	200	NA	NA	NA	101.7	4	146	NA	NA	NA	4	146	NA	NA	40			
BENZO(B)FLUORANTHENE	5.0	ND	100	95.5	ND	200	NA	NA	NA	95.5	24	159	NA	NA	NA	24	159	NA	NA	40			
BENZO(K)FLUORANTHENE	5.0	ND	100	109.3	ND	200	NA	NA	NA	109.3	11	162	NA	NA	NA	11	162	NA	NA	40			
BENZO(A)PYRENE	5.0	ND	100	97.9	ND	200	NA	NA	NA	97.9	17	163	NA	NA	NA	17	163	NA	NA	40			
INDENO(1,2,3-CD)PYRENE	5.0	ND	100	95.3	ND	200	NA	NA	NA	95.3	5	171	NA	NA	NA	5	171	NA	NA	40			
DIBENZ(A,H)ANTHRACENE	5.0	ND	100	91.9	ND	200	NA	NA	NA	91.9	5	227	NA	NA	NA	5	227	NA	NA	40			
BENZO(G,H,I)PERYLENE	5.0	ND	100	97.6	ND	200	NA	NA	NA	97.6	5	219	NA	NA	NA	5	219	NA	NA	40			
SURROGATES																							
2-FLUOROPHENOL		34.7	100	32.4	NA	100	NA	NA	34.7	32.4	21	100	NA	NA	NA	21	100						
PHENOL - D5		24.6	100	22.9	NA	100	NA	NA	24.6	22.9	10	94	NA	NA	NA	10	94						
NITROBENZENE - D5		28.3	50	26.4	NA	50	NA	NA	56.7	52.8	35	114	NA	NA	NA	35	114						
2-FLUOROBIPHENYL		28.2	50	26.3	NA	50	NA	NA	56.3	52.6	43	116	NA	NA	NA	43	116						
2,4,6-TRIBROMOPHENOL		57.2	100	75.7	NA	100	NA	NA	57.2	75.7	10	123	NA	NA	NA	10	123						
o-TERPHENYL - D14		47.9	50	55.2	NA	50	NA	NA	95.7	110.3	33	141	NA	NA	NA	33	#141						

KEMRON ENVIRONMENTAL SERVICES

MARIETTA, OH

QUALITY CONTROL SUMMARY / 8081 WATERS , FRONT

INSTRUMENT : HP9

EXT'N DATE : 10/21/98 ANALYST : ECL BLK FLNM : 962 SAMPLE ID : 10-336-01

EXT'N BENCH SHT : V103P47 RUN DATE : 10/25/98 LCS FLNM : 963 SMPL FLNM : 964

EXT'N WORK GRP : WG48068 ANAL WORK GRP : WG48292 MS FLNM : 965

MSD FLNM : 966

COMPOUND	RDL	CONCENTRATION , ug/L					% RECOVERY								PERCENT	
		Blank	LCS	Sample	MS	MSD	Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	MS/MSD RPD	RPD Advisory Limits
ALPHA-BHC	0.05	ND	0.242	ND	0.794	0.717	NA	48.4	37	134	NA	79.4	71.7	51	145	10.2	0-43
GAMMA-BHC	0.05	ND	0.239	ND	0.862	0.826	NA	47.8	32	127	NA	86.2	82.6	54	134	4.3	0-18
BETA-BHC	0.05	ND	0.349	ND	1.04	1.03	NA	69.8	17	147	NA	103.8	103.1	51	129	0.7	0-28
HEPTACHLOR	0.05	ND	0.261	ND	0.885	0.864	NA	52.2	34	111	NA	88.5	86.4	40	139	2.4	0-37
DELTA-BHC	0.05	ND	0.343	ND	1.15	1.10	NA	68.6	19	140	NA	115.2	110.4	58	138	4.3	0-78
ALDRIN	0.05	ND	0.215	ND	0.769	0.723	NA	43.0	42	122	NA	76.9	72.3	26	143	6.2	0-38
HEPTACHLOR EPOXIDE	0.05	ND	0.273	ND	0.937	0.875	NA	54.6	37	142	NA	93.7	87.5	51	135	6.8	0-40
GAMMA-CHLORDANE	0.05	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40
ALPHA-CHLORDANE	0.05	ND	NA	ND	NA	NA	NA	NA	54	119	NA	NA	NA	45	115	NA	0-17
ENDOSULFAN I	0.05	ND	0.235	ND	0.781	0.731	NA	47.0	45	153	NA	78.1	73.1	37	123	6.8	0-22
4,4-DDE	0.10	ND	0.354	ND	1.03	0.943	NA	70.8	30	145	NA	102.5	94.3	84	152	8.3	0-23
DIELDRIN	0.10	ND	0.341	ND	1.08	1.00	NA	68.2	36	146	NA	108.3	100.1	23	171	7.9	0-20
ENDRIN	0.10	ND	0.352	ND	1.10	1.01	NA	70.4	30	147	NA	110.3	100.5	58	154	9.3	0-28
4,4-DDD	0.10	ND	0.404	ND	1.06	0.973	NA	80.8	31	141	NA	106.1	97.3	56	179	8.7	0-30
ENDOSULFAN II	0.10	ND	0.298	ND	0.865	0.805	NA	59.6	D	202	NA	86.5	80.5	21	117	7.2	0-18
4,4-DDT	0.10	ND	0.397	ND	1.06	0.972	NA	79.4	25	160	NA	106.5	97.2	42	168	8.2	0-22
ENDRIN ALDEHYDE	0.10	ND	0.240	ND	0.709	0.670	NA	48.0	NA	NA	NA	70.9	67.0	21	115	5.7	0-40
ENDOSULFAN SULFATE	0.10	ND	0.262	ND	0.789	0.728	NA	52.4	26	144	NA	78.9	72.8	31	147	8.0	0-30
METHOXYCHLOR	0.50	ND	0.392	ND	1.03	0.945	NA	78.4	NA	NA	NA	102.7	94.5	26	196	8.3	0-19
ENDRIN KETONE	0.10	ND	0.326	ND	0.923	0.856	NA	65.2	NA	NA	NA	92.3	85.6	NA	NA	7.5	
Tech-CHLORDANE	1.00	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40
TOXAPHENE	1.00	ND	NA	ND	NA	NA	NA	NA	41	126	NA	NA	NA	40	125	NA	0-40
SURROGATES																	
2,4,5,6-TETRACHLORO-M-XYLENE		6.40	7.66	10.8	13.0	10.8	42.0	38.3	13	154	54.0	65.1	53.9	13	154		
DECACHLOROBIPHENYL		16.5	15.9	12.8	15.1	14.9	82.5	79.4	25	140	63.8	75.5	74.7	25	140		

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 2.5 ug/kg

SURROGATES spiked at 20 ug/kg

NA = NOT APPLICABLE

DL = DILUTED OUT

ND = NOT DETECTED

RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE

MS=MATRIX SPIKE

MSD=MATRIX SPIKE DUPLICATE

KEMRON ENVIRONMENTAL SERVICES

MARIETTA, OH

QUALITY CONTROL SUMMARY / 8081 WATERS , REAR

INSTRUMENT : HP9

EXT'N DATE : 10/21/98 ANALYST : ECL BLK FLNM : 962 SAMPLE ID : 10-336-01

EXT'N BENCH SHT : V103P47 RUN DATE : 10/25/98 LCS FLNM : 963 SMPL FLNM : 964

EXT'N WORK GRP : WG48066 ANAL WORK GRP : WG48292 MS FLNM : 965

MSD FLNM : 966

COMPOUND	RDL	CONCENTRATION , ug/L					% RECOVERY							PERCENT			
		Blank	LCS	Sample	MS	MSD	Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	MS/MSD RPD	RPD Advisory Limits
ALPHA-BHC	0.05	ND	0.222	ND	0.730	0.651	NA	44.4	37	134	NA	73.0	65.1	51	145	11.4	0-43
GAMMA-BHC	0.05	ND	0.241	ND	0.810	0.760	NA	48.2	32	127	NA	81.0	76.0	54	134	6.4	0-18
BETA-BHC	0.05	ND	0.295	ND	0.945	0.901	NA	59.0	17	147	NA	94.5	90.1	51	129	4.8	0-28
HEPTACHLOR	0.05	ND	0.206	ND	0.732	0.693	NA	41.2	34	111	NA	73.2	69.3	40	139	5.6	0-37
DELTA-BHC	0.05	ND	0.335	ND	1.05	1.00	NA	67.0	19	140	NA	105.0	100.0	56	138	4.9	0-78
ALDRIN	0.05	ND	0.208	ND	0.744	0.703	NA	41.6	42	122	NA	74.4	70.3	28	143	5.7	0-38
HEPTACHLOR EPOXIDE	0.05	ND	0.264	ND	0.890	0.845	NA	52.8	37	142	NA	89.0	84.5	51	135	5.2	0-40
GAMMA-CHLORDANE	0.05	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40
ALPHA-CHLORDANE	0.05	ND	NA	ND	NA	NA	NA	NA	54	119	NA	NA	NA	45	115	NA	0-17
ENDOSULFAN I	0.05	ND	0.233	ND	0.740	0.703	NA	46.6	45	153	NA	74.0	70.3	37	123	5.1	0-22
4,4-DDE	0.10	ND	0.355	ND	1.00	0.936	NA	71.0	30	145	NA	100.1	93.6	64	152	6.7	0-23
DIELDRIN	0.10	ND	0.330	ND	1.04	0.975	NA	66.0	36	146	NA	103.8	97.5	23	171	6.3	0-20
ENDRIN	0.10	ND	0.386	ND	1.19	1.11	NA	77	30	147	NA	119.4	110.9	56	154	7.4	0-28
4,4-DDD	0.10	ND	0.306	ND	0.862	0.805	NA	61.2	31	141	NA	86.2	80.5	56	179	6.8	0-30
ENDOSULFAN II	0.10	ND	0.410	ND	1.06	0.979	NA	82.0	D	202	NA	105.9	97.9	21	117	7.9	0-18
4,4-DDT	0.10	ND	0.392	ND	0.987	0.924	NA	78.4	25	160	NA	98.7	92.4	42	168	6.8	0-22
ENDRIN ALDEHYDE	0.10	ND	0.247	ND	0.684	0.649	NA	49.4	NA	NA	NA	68.4	64.9	21	115	5.3	0-40
ENDOSULFAN SULFATE	0.10	ND	0.266	ND	0.768	0.718	NA	53.2	26	144	NA	76.8	71.8	31	117	6.7	0-30
METHOXYCHLOR	0.10	ND	0.402	ND	0.988	0.926	NA	80	NA	NA	NA	98.8	92.6	26	196	6.5	0-19
ENDRIN KETONE	0.50	ND	0.313	ND	0.867	0.812	NA	63	NA	NA	NA	86.7	81.2	NA	NA	6.6	
Tech-CHLORDANE	1.0	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40
TOXAPHENE	1.0	ND	NA	ND	NA	NA	NA	NA	41	126	NA	NA	NA	40	125	NA	0-40
SURROGATES																	
2,4,5,6-TETRACHLORO-M-XYLENE		8.31	7.78	10.4	13.0	9.75	41.6	38.9	13	154	52.0	64.8	48.8	13	154		
DECACHLOROBIPHENYL		15.8	15.2	11.8	13.9	13.9	79.1	75.8	25	140	59.1	69.3	69.6	25	140		

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 2.5 ug/kg

SURROGATES spiked at 20 ug/kg

NA = NOT APPLICABLE

DL = DILUTED OUT

ND = NOT DETECTED

RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE

MS=MATRIX SPIKE

MSD=MATRIX SPIKE DUPLICATE

KEMRON ENVIRONMENTAL SERVICES
MARIETTA, OH
QUALITY CONTROL SUMMARY / PCB WATERS , REAR

EXT'N DATE : 10/21/98	INSTRUMENT : HP10			SMPL ID : 10-367-01
EXT'N BENCH SHT : V103P48	ANALYST : CDB	BLK FLNM : 052R0101		SMPL FLNM : 054R0101
EXT'N WORK GRP : WG48069	RUN DATE : 10/22/98	LCS FLNM : 053R0101		MS FLNM : 055R0101
	ANAL WORK GRP : WG48155	LCS Dup FLNM : NA		MSD FLNM : 056R0101

COMPOUND	RDL	CONCENTRATION , ug/L					% RECOVERY									PERCENT						
		Blank	LCS	Sample	MS	MSD	Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	RPD	RPD Advisory Limits	Blank	LCS	Sample	MS	MSD
AROCLOR 1016	0.5	ND	1.81	ND	4.15	4.04	NA	72.2	48	125	NA	79.0	76.9	48	125	2.7	NA					
AROCLOR 1221	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1232	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1242	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1248	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1254	1.0	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0-40					
AROCLOR 1260	1.0	ND	2.53	ND	5.45	5.47	NA	101	59	122	NA	104	104	59	122	0.4	NA					
SURROGATES																						
2,4,5,6-TETRACHLORO-M-XYLENE		0.076	0.113	0.113	0.249	0.251	38.0	56.5	13	154	56.5	59.3	59.8	13	154							
DECACHLOROBIPHENYL		0.148	0.150	0.164	0.406	0.396	74.0	75.0	25	140	82.0	96.7	94.3	25	140							

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 2.5 ug/kg
SURROGATES spiked at .200 ug/kg
NA = NOT APPLICABLE
DL = DILUTED OUT
ND = NOT DETECTED
RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE
MS=MATRIX SPIKE
MSD=MATRIX SPIKE DUPLICATE

KEMRON
ENVIRONMENTAL SERVICES

CHAIN-OF-CUSTODY RECORD

94524

Page _____ of _____

Project Contact: W. BURTON

Turn Around Requirements:

Project No.:

Project Name: PEDERICKTON

Sampler (print):

Signature: Wm Burton

Sample I.D. No.	Comp*	Grab	Date	Time	Protocol CWA	Protocol SW846	NUMBER OF SAMPLES	Hold	625A,B,608(1SVOC;1PEST)	624 (1 VOL)	CN (PRES. NAOH)	BLANK	ADDITIONAL REQUIREMENTS
INLET 101598		X	10/15/98	9:15					2	2	1		
TEMP BLANK												1	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
				Wm Burton	10/15/98	1300	

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:
			Stacy L Smith	10/16/98	1213	c/c Sealed Samples Intact Cooler temp 6°

*Homogenize all composite samples prior to analysis

White – Lab Yellow – Office Pink – Field

KEMRON Environmental Services
109 Starlite Park
Marietta, Ohio 45750
Phone: (740) 373-4071

Versar, Inc.
9200 Rumsey Road
Columbia, MD 21045-1934

Attention: William Burton

PO Number:
Account Number: VERSAR-MD-331

Login #: L9810551
Report Date: 11/10/98
Work ID: 4119-007/PEDRICKTOWN
Date Received: 10/27/98

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9810551-01	INLET 102698/WATER	L9810551-02	INLET 102698/SEDIMENT

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

Certified By
Dennis S. Tepe

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9810551-01
Client Sample ID: INLET 102698/WATER
Site/Work ID: 4119-007/PEDRICKTOWN

Matrix: Water
Collected: 10/26/98 1330

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	130000	(A)	5.0	1	N/A	DLP	10/28/98	10:45	160.2

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9810551-01
Client Sample ID: INLET 102698/WATER
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/26/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/29/98
Analysis Date: 10/30/98 Time: 19:23

Instrument: HP10
Analyst: CDB
Lab File ID: 063R0101

Method: 8082\3510C
Run ID: R55488
Batch : WG48607

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016.....	ug/L		ND	0.55	1.1
11104-28-2	Aroclor-1221.....	ug/L		ND	0.55	1.1
11141-16-5	Aroclor-1232.....	ug/L		ND	0.55	1.1
53469-21-9	Aroclor-1242.....	ug/L		ND	0.55	1.1
12672-29-6	Aroclor-1248.....	ug/L		ND	0.55	1.1
11097-69-1	Aroclor-1254.....	ug/L		ND	1.1	1.1
11096-82-5	Aroclor-1260.....	ug/L		ND	1.1	1.1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene.....	4.00	*	(13 - 154%)
Decachlorobiphenyl.....	28.8		(25 - 140%)

RL = Reporting Limit

Login #L9810551
November 10, 1998 12:53 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9810551-01
Client Sample ID: INLET 102698/WATER
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 10/29/98
Analysis Date: 11/04/98 Time:

Dil. Type: N/A
COC Info: N/A

Date Collected: 10/26/98

Instrument: HP9
Analyst: ECL
Lab File ID: 1241

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8081A\3510C
Run ID: R55837
Batch : WG48856

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L		ND	0.055	1.1
319-85-7	beta-BHC	ug/L		ND	0.055	1.1
319-86-8	delta-BHC	ug/L		ND	0.055	1.1
58-89-9	gamma-BHC (Lindane)	ug/L		ND	0.055	1.1
76-44-8	Heptachlor	ug/L		ND	0.055	1.1
309-00-2	Aldrin	ug/L		ND	0.055	1.1
1024-57-3	Heptachlor epoxide	ug/L		ND	0.055	1.1
959-98-8	Endosulfan I	ug/L		ND	0.055	1.1
60-57-1	Dieldrin	ug/L		ND	0.055	1.1
72-55-9	4,4'-DDE	ug/L		ND	0.11	1.1
72-20-8	Endrin	ug/L		ND	0.11	1.1
33213-65-9	Endosulfan II	ug/L		ND	0.11	1.1
72-54-8	4,4'-DDD	ug/L		ND	0.11	1.1
1031-07-8	Endosulfan sulfate	ug/L		ND	0.11	1.1
50-29-3	4,4'-DDT	ug/L		ND	0.11	1.1
72-43-5	Methoxychlor	ug/L		ND	0.11	1.1
53494-70-5	Endrin ketone	ug/L		ND	0.55	1.1
7421-93-4	Endrin aldehyde	ug/L		ND	0.11	1.1
5103-71-9	alpha Chlordane	ug/L		ND	0.11	1.1
5103-74-2	gamma Chlordane	ug/L		ND	0.055	1.1
8001-35-2	Toxaphene	ug/L		ND	0.055	1.1
					1.1	1.1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	2.43	*	(13 - 154%)
Decachlorobiphenyl	31.8		(25 - 140%)

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9810551-01
Client Sample ID: INLET 102698/WATER
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/26/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/29/98
Analysis Date: 10/29/98 Time: 23:38

Instrument: HPMS3
Analyst: MDC
Lab File ID: 14922

Method: 8270C\3510C
Run ID: R55852
Batch : WG48664

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L		ND	10	2
111-44-4	Bis(2-Chloroethyl)ether	ug/L		ND	10	2
95-57-8	2-Chlorophenol	ug/L		ND	10	2
541-73-1	1,3-Dichlorobenzene	ug/L		ND	10	2
106-46-7	1,4-Dichlorobenzene	ug/L		ND	10	2
95-50-1	1,2-Dichlorobenzene	ug/L		ND	10	2
95-48-7	2-Methylphenol	ug/L		ND	10	2
108-60-1	bis(2-Chloroisopropyl)ether	ug/L		ND	10	2
106-44-5	4-Methylphenol	ug/L		ND	10	2
621-64-7	N-Nitroso-di-n-propylamine	ug/L		ND	10	2
67-72-1	Hexachloroethane	ug/L		ND	10	2
98-95-3	Nitrobenzene	ug/L		ND	10	2
78-59-1	Isophorone	ug/L		ND	10	2
88-75-5	2-Nitrophenol	ug/L		ND	10	2
105-67-9	2,4-Dimethylphenol	ug/L		ND	10	2
111-91-1	Bis(2-Chloroethoxy)Methane	ug/L		ND	10	2
120-83-2	2,4-Dichlorophenol	ug/L		ND	10	2
120-82-1	1,2,4-Trichlorobenzene	ug/L		ND	10	2
91-20-3	Naphthalene	ug/L		ND	10	2
106-47-8	4-Chloroaniline	ug/L		ND	10	2
87-68-3	Hexachlorobutadiene	ug/L		ND	10	2
59-50-7	4-Chloro-3-methylphenol	ug/L		ND	10	2
91-57-6	2-Methylnaphthalene	ug/L		ND	10	2
77-47-4	Hexachlorocyclopentadiene	ug/L		ND	10	2
88-06-2	2,4,6-Trichlorophenol	ug/L		ND	10	2
95-95-4	2,4,5-Trichlorophenol	ug/L		ND	50	2
91-58-7	2-Chloronaphthalene	ug/L		ND	10	2
88-74-4	2-Nitroaniline	ug/L		ND	50	2
131-11-3	Dimethylphthalate	ug/L		ND	10	2
208-96-8	Acenaphthylene	ug/L		ND	10	2
606-20-2	2,6-Dinitrotoluene	ug/L		ND	10	2
99-09-2	3-Nitroaniline	ug/L		ND	50	2
83-32-9	Acenaphthene	ug/L		ND	10	2
51-28-5	2,4-Dinitrophenol	ug/L		ND	50	2
100-02-7	4-Nitrophenol	ug/L		ND	50	2
132-64-9	Dibenzofuran	ug/L		ND	10	2
121-14-2	2,4-Dinitrotoluene	ug/L		ND	10	2
84-66-2	Diethylphthalate	ug/L		ND	10	2
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L		ND	10	2

RL = Reporting Limit

Login #L9810551
November 10, 1998 12:53 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9810551-01
Client Sample ID: INLET 102698/WATER
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/26/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 10/29/98
Analysis Date: 10/29/98 Time: 23:38

Instrument: HPMS3
Analyst: MDC
Lab File ID: 14922

Method: 8270C\3510C
Run ID: R55852
Batch : WG48664

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L		ND	10	2
100-01-6	4-Nitroaniline	ug/L		ND	50	2
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	50	2
86-30-6	N-Nitrosodiphenylamine	ug/L		ND	10	2
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	10	2
118-74-1	Hexachlorobenzene	ug/L		ND	10	2
87-86-5	Pentachlorophenol	ug/L		ND	50	2
85-01-8	Phenanthrene	ug/L		ND	10	2
120-12-7	Anthracene	ug/L		ND	10	2
86-74-8	Carbazole	ug/L		ND	10	2
84-74-2	Di-N-Butylphthalate	ug/L		ND	10	2
206-44-0	Fluoranthene	ug/L		ND	10	2
129-00-0	Pyrene	ug/L		ND	10	2
85-68-7	Butylbenzylphthalate	ug/L		ND	10	2
91-94-1	3,3'-Dichlorobenzidine	ug/L		ND	20	2
56-55-3	Benzo(a)anthracene	ug/L		ND	10	2
218-01-9	Chrysene	ug/L		ND	10	2
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	10	2
117-84-0	Di-n-octylphthalate	ug/L		ND	10	2
205-99-2	Benzo(b)fluoranthene	ug/L		ND	10	2
207-08-9	Benzo(k)fluoranthene	ug/L		ND	10	2
50-32-8	Benzo(a)pyrene	ug/L		ND	10	2
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L		ND	10	2
53-70-3	Dibenzo(a,h)Anthracene	ug/L		ND	10	2
191-24-2	Benzo(g,h,i)Perylene	ug/L		ND	10	2

SURROGATES- In Percent Recovery:

2-Fluorophenol	4.70	*SMI	(21 - 100%)
Phenol-d5	5.80	*SMI	(10 - 94%)
Nitrobenzene-d5	2.00	*SMI	(35 - 114%)
2-Fluorobiphenyl	1.10	*SMI	(43 - 116%)
2,4,6-Tribromophenol	1.90	*SMI	(10 - 123%)
p-Terphenyl-d14	0.700	*SMI	(33 - 141%)

RL = Reporting Limit

Login #L9810551
November 10, 1998 12:53 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9810551-01
Client Sample ID: INLET 102698/WATER
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/06/98 Time: 14:27

Dil. Type: N/A
COC Info: N/A

Date Collected: 10/26/98

Instrument: HPMS2
Analyst: SLT
Lab File ID: 2VR27415

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8260B
Run ID: R55807
Batch : WG49007

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/L		ND	10	1
74-83-9	Bromomethane	ug/L		ND	10	1
75-01-4	Vinyl chloride	ug/L		ND	10	1
75-00-3	Chloroethane	ug/L		ND	10	1
75-09-2	Methylene chloride	ug/L		ND	5.0	1
67-64-1	Acetone	ug/L		ND	10	1
75-15-0	Carbon disulfide	ug/L		ND	5.0	1
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1
75-34-3	1,1-Dichloroethane	ug/L		ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L		ND	5.0	1
67-66-3	Chloroform	ug/L		ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	1
78-93-3	2-Butanone	ug/L		ND	5.0	1
71-55-6	1,1,1-Trichloroethane	ug/L		ND	10	1
56-23-5	Carbon tetrachloride	ug/L		ND	5.0	1
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	1
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	1
79-01-6	Trichloroethene	ug/L		ND	5.0	1
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1
71-43-2	Benzene	ug/L		ND	5.0	1
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	1
75-25-2	Bromoform	ug/L		ND	5.0	1
108-10-1	4-Methyl-2-pentanone	ug/L		ND	5.0	1
591-78-6	2-Hexanone	ug/L		ND	10	1
127-18-4	Tetrachloroethene	ug/L		ND	10	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0	1
108-88-3	Toluene	ug/L		ND	5.0	1
108-90-7	Chlorobenzene	ug/L		ND	5.0	1
100-41-4	Ethyl benzene	ug/L		ND	5.0	1
100-42-5	Styrene	ug/L		ND	5.0	1
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1

SURROGATES- In Percent Recovery:

Dibromofluoromethane	94.8	(86 - 118%)
1,2-Dichloroethane-d4	95.1	(80 - 120%)
Toluene-d8	94.7	(88 - 110%)
p-Bromofluorobenzene	94.4	(86 - 115%)

RL = Reporting Limit

Login #L9810551
November 10, 1998 12:53 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9810551-02
Client Sample ID: INLET 102698/SEDIMENT
Site/Work ID: 4119-007/PEDRICKTOWN

Matrix: Soil
Collected: 10/26/98 1330

% Solid: 12
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids.....	% wt.	12		1.0	1	N/A	DIH	11/06/98	12:45	D2216-90

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9810551-02
Client Sample ID: INLET 102698/SEDIMENT
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Soil

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/05/98 Time: 13:36

Dil. Type: N/A
COC Info: N/A

Date Collected: 10/26/98

Instrument: HPMS6
Analyst: CMS
Lab File ID: 6VR11220

Sample Weight: N/A
Extract Volume: N/A

% Solid: 12

Method: 8260B
Run ID: R55844
Batch : WG48909

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane.....	ug/kg		ND	83	1
74-83-9	Bromomethane.....	ug/kg		ND	83	1
75-01-4	Vinyl chloride.....	ug/kg		ND	83	1
75-00-3	Chloroethane.....	ug/kg		ND	83	1
75-09-2	Methylene chloride.....	ug/kg		ND	42	1
67-64-1	Acetone.....	ug/kg	210		83	1
75-15-0	Carbon disulfide.....	ug/kg		ND	42	1
75-35-4	1,1-Dichloroethene.....	ug/kg		ND	42	1
75-34-3	1,1-Dichloroethane.....	ug/kg		ND	42	1
540-59-0	1,2-Dichloroethene (Total).....	ug/kg		ND	42	1
67-66-3	Chloroform.....	ug/kg		ND	42	1
107-06-2	1,2-Dichloroethane.....	ug/kg		ND	42	1
78-93-3	2-Butanone.....	ug/kg		ND	83	1
71-55-6	1,1,1-Trichloroethane.....	ug/kg		ND	42	1
56-23-5	Carbon tetrachloride.....	ug/kg		ND	42	1
75-27-4	Bromodichloromethane.....	ug/kg		ND	42	1
78-87-5	1,2-Dichloropropane.....	ug/kg		ND	42	1
10061-01-5	cis-1,3-Dichloropropene.....	ug/kg		ND	42	1
79-01-6	Trichloroethene.....	ug/kg		ND	42	1
124-48-1	Dibromochloromethane.....	ug/kg		ND	42	1
79-00-5	1,1,2-Trichloroethane.....	ug/kg		ND	42	1
71-43-2	Benzene.....	ug/kg		ND	42	1
10061-02-6	trans-1,3-Dichloropropene.....	ug/kg		ND	42	1
75-25-2	Bromoform.....	ug/kg		ND	42	1

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9810551-02
Client Sample ID: INLET 102698/SEDIMENT
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Soil

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/26/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: 12

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/05/98 Time: 13:36

Instrument: HPMS6
Analyst: CMS
Lab File ID: 6VR11220

Method: 8260B
Run ID: R55844
Batch : WG48909

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
108-10-1	4-Methyl-2-pentanone	ug/kg		ND	83	1
591-78-6	2-Hexanone	ug/kg		ND	83	1
127-18-4	Tetrachloroethene	ug/kg		ND	42	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/kg		ND	42	1
108-88-3	Toluene	ug/kg		ND	42	1
108-90-7	Chlorobenzene	ug/kg		ND	42	1
100-41-4	Ethyl benzene	ug/kg		ND	42	1
100-42-5	Styrene	ug/kg		ND	42	1
1330-20-7	Xylenes, Total	ug/kg		ND	42	1

SURROGATES- In Percent Recovery:

Dibromofluoromethane	117		(80 - 120%)
1,2-Dichloroethane-d4	127	*,RE	(80 - 120%)
Toluene-d8	115		(81 - 117%)
p-Bromofluorobenzene	126	*,RE	(74 - 121%)

RL = Reporting Limit

Order #: 98-10-551
November 10, 1998 12:53 pm

KEMRON ENVIRONMENTAL SERVICES
WORK GROUPS

Work Group	Run ID	Sample	Dil Type	Matrix	Product	Method	Analyst	Date Collected	Run Date	Run Time	Department
WG48549	R55837	L9810551-01		Water	Organochlorine Pesticides	8081A\3510C	ECL	26-OCT-1998	04-NOV-1998		Extraction
WG48550	R55488	L9810551-01		Water	PCB's (Water)	8082\3510C	CDB	26-OCT-1998	30-OCT-1998	19:23	Extraction
WG48554	R55852	L9810551-01		Water	TCL Semivolatiles	8270C\3510C	MDC	26-OCT-1998	29-OCT-1998	23:38	Extraction
WG48585	R55249	L9810551-01		Water	Total Suspended Solids	160.2	DLP	26-OCT-1998	28-OCT-1998	10:45	Conventionals
WG48607	R55488	L9810551-01		Water	PCB's (Water)	8082\3510C	CDB	26-OCT-1998	30-OCT-1998	19:23	Semivolatile - GC
WG48664	R55852	L9810551-01		Water	TCL Semivolatiles	8270C\3510C	MDC	26-OCT-1998	29-OCT-1998	23:38	Semivolatile - GC/MS
WG48856	R55837	L9810551-01		Water	Organochlorine Pesticides	8081A\3510C	ECL	26-OCT-1998	04-NOV-1998		Semivolatile - GC
WG48909	R55844	L9810551-02		Soil	TCL Volatiles	8260B	CMS	26-OCT-1998	05-NOV-1998	13:36	Volatile - GC/MS
WG48996	R55802	L9810551-02		Soil	Percent Solids	D2216-90	DIH	26-OCT-1998	06-NOV-1998	12:45	Conventionals
WG49007	R55807	L9810551-01		Water	TCL Volatiles	8260B	SLT	26-OCT-1998	06-NOV-1998	14:27	Volatile - GC/MS

KEMRON ANALYST LIST

Ohio Valley Laboratory

10/28/98

ALC - - Ann L. Clark
BAD - - Becky A. Diehl
CEB - - Chad E. Barnes
CDB - - Christy D. Burton
CLH - - Chris L. Hurst
CMS - - Crystal M. Stevens
CRC - - Carla R. Cochran
DIH - - Deanna I. Hesson
DKM - - Dewey K. Miller
DLN - - Deanna L. Norton
DLP - - Dorothy L. Payne
ECL - - Eric C. Lawson
FEH - - Fay E. Harmon
HV - - Hema Vilasagar
JLH - - Janice L. Holland
JWR - - John W. Richards
JYH - - Ji Y. Hu
KHA - - Kim H. Archer
KMS - - Kevin M. Stutler
KRA - - Kathy R. Albertson
MDA - - Mike D. Albertson
MDC - - Michael D. Cochran
MES - - Mary E. Schiling
MLS - - Michael L. Schimmel
MMB - - Maren M. Beery
RDC - - Rebecca D. Cutlip
RDS - - Rebecca D. Sutton
REF - - Ron E. Fertile
REK - - Robert E. Kyer
RSS - - Regina S. Simmons
RWC - - Rodney W. Campbell
SJK - - Sindy J. Kinney
SJM - - Shawn J. Marshall
SLP - - Sheri L. Pfalzgraf
SLT - - Stephanie L. Tepe
SMW - - Shauna M. Welch
SPL - - Steve P. Learn
TJW - - Thomas J. Ware
TRS - - Todd R. Stack
VC - - Vicki Collier
VMN - - Vincent M. Nedeff

KEMRON Environmental Services, Inc.
LIST OF VALID QUALIFIERS (qual)
March 9, 1998

Qualifier	Description
(A)	See the report narrative
(B)	See the report narrative
(C)	See the report narrative
+	Correlation coefficient for the MSA is less than 0.995
<	Less than
>	Greater than
B	Present in the method blank
C	Confirmed by GC/MS
*	Surrogate or spike compound out of range
CG	Confluent growth
D	The analyte was quantified at a secondary dilution factor
DL	Surrogate or spike was diluted out
E	Estimated concentration due to sample matrix interference
F	Present below nominal reporting limit (AFCEE only)
FL	Free liquid
I	Semiquantitative result, out of instrument calibration range
J	Present below nominal reporting limit
L	Sample reporting limits elevated due to matrix interference
M	Duplicate injection precision not met

Qualifier	Description
N	Tentatively Identified Compound (TIC)
NA	Not applicable
ND	Not detected at or above the reporting limit (RL)
NF	Not found
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentration > 25% difference between the two GC columns
QNS	Quantity not sufficient to perform analysis
R	Analyte exceeds regulatory limit
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TNTC	Too numerous to count
U	Analyzed for but not detected
W	Post-digestion spike for furnace AA out of control limits
X	Can not be resolved from isomer. See below.

Special Notes for Organic Analytes

1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

KEMRON ENVIRONMENTAL SERVICES
OHIO VALLEY LABORATORY
QUALITY CONTROL SUMMARY

WORKGROUP: wg46585
METHOD: 160.2
MATRIX: Water
UNITS: mg/L

RUN DATE: 10/28/98
ANALYST: dlp
DUPLICATE: 10-551-01

ANALYTE	RDL	Blank	T-LCS	LCS	REP1	REP2	SAMPLE RESULT	T-MS	MS	PERCENT RECOVERY LCS	LCS LCL	LCS UCL	MS	MS LCL	MS UCL	PERCENT RPD REP RPD	RPD UCL
TSS	5.00	ND	50.00	50.00	126000.00	126000.00	NR	NR	NR	100.0	83.5	120.0	NR	NR	NR	0.00	20.00

NOTES & DEFINITIONS :

ROL = REPORTING DETECTION LIMIT
DL = DILUTED OUT
NA = NOT APPLICABLE
ND = NOT DETECTED
NR = NOT REQUIRED

LCS = LABORATORY CONTROL SAMPLE
T- LCS = TRUE VALUE OF LCS
REP1 = UNSPIKED SAMPLE REPLICATE 1
REP2 = UNSPIKED SAMPLE REPLICATE 2
SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX
T-MS = TRUE VALUE OF MATRIX SPIKE
MS = MATRIX SPIKE
LCL = LOWER CONTROL LIMIT
UCL = UPPER CONTROL LIMIT

REP RPD = RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES

Versar

5497

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME	INDUSTRIAL HYGIENE SAMPLE Y / N
419-007	Pedricktown	

SAMPLERS: (Signature) JSF EX (Printed) Jessica Jewrar

FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOC - 40 ML	SVOC - 1L AG	Pest/PCB - 1L AG	TSS	Temp Blank				REMARKS
INLET 102698	10-26-98	1330		X	INLET	5	1	1	1	1	1				SLURRY SAMPLE

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
(Printed) JS Farr	10/26/1530	(Printed)	(Printed)		(Printed)

Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks
(Printed)		(Printed) Brenda Gregory	10/27/98 1000	C of C Dated Sp Cont act Cooler Temp 6.0

Brenda Gregory

Work Order 9810551 Client Ver. MD #of Samples 2 Due Date 11/10 Page 1

#	Analyses	Reason	Removed By ADT	Removed From	MovedTo	Reliq. By	Ret'd by ADT	Ret'd To	Rec'd By	Reason
	TSS	final	DLP 10-27-98 @20	walk-IN	wet	Blq	DLP 10-27-98/1615	Archive	Blq	Archive
	BNA	Ext	10/29/98 RB @ 1305	WALKIN	ELAB	Blq	SMW 10/30/98 @0800	Dumpster	Blq	Disposed
	PCB	↓	↓	↓	↓	Blq	SMW 10/30/98 @0800	Dumpster	Blq	Disposed
2	8260	anal	CMS 11/5/98 @ 0745	V-1	VOA	Blq	Blq 11/10/98 @1500	Archive	[illegible]	Archive
	PCT-S	test	dah 11/6/1300 1998	archive used oil TSS archive	wet	Blq	dah 11/6/1310 1998	archive	Blq	Archive

Work Order L9810411 Client Ver-mD #of Samples 2 Due Date 10/30 Page 1

Sample #	Analyses	Reason	Removed By ADT	Removed From	MovedTo	Reliq. By	Ret'd by ADT	Ret'd To	Rec'd By	Reason
01	CN	Anal.	JWR 10/21/98/0910	Walk In	Wet Lab	BIG	JWR/10/21/98/1310	Archive	BIG	Archive
01	PEST/PCB	EXT	CEB 10/22/98 @ 0720	WALKIN	ELAB	BIG	SMW 10/22/98@0800	Dumpster	JS	disposal
01	BNA	EXT	CEB 10/22/98@1300	WALKIN	ELAB	BIG	SMW 10/22/98@0800	Dumpster	BIG	Disposal
1-2	826	AN	MES 10/24/98 1145	V-1	VOA	BIG	MES 1535 11/05/98	Archive	BIG	Archive
1-2	PCBS	TEST	DR 10/27/98/1445	walk in	wet	BIG	DR 10/27/98/1500	Archive	BIG	Archive

KEMRON Environmental Services
109 Starli[illegible] Park
Marietta, Oh[illegible] 45750
Phone: (740) 373-4071

Versar, Inc.
9200 Rumsey Road
Columbia, MD 21045-1934

Attention: William Burton

PO Number:
Account Number: VERSAR-MD-331

Login #: L9810634
Report Date: 11/12/98
Work ID: 4119-007/PACOE PEDRICKTOWN
Date Received: 10/30/98

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9810634-01	WEIR 102998	L9810634-02	WEIR 102898
L9810634-03	WEIR 102798	L9810634-04	BG202998
L9810634-05	MIX102998		

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

Certified By
Dennis S. Tepe

KEMRON
ENVIRONMENTAL SERVICES

gin #L9810634
vember 12, 1998 03:51 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9810634-01
ient Sample ID: WEIR 102998
Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water
Collected: 10/29/98 N/A

COC Info: N/A

alyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
anide, Total.....	mg/L		ND	0.01	1	N/A	SJM	11/09/98	13:00	9010B\9014
tal Suspended Solids.....	mg/L	28		5.0	1	N/A	DLP	11/02/98	12:00	160.2

= Reporting Limit

Login #L9810
November 12, 1998 03:51 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9810634-01
Client Sample ID: WEIR 102998
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/03/98
Analysis Date: 11/05/98 Time:

Dil. Type: N/A
COC Info: N/A

Date Collected: 10/29/98

Instrument: HP4
Analyst: ECL
Lab File ID: 035R0101

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8082\3510C
Run ID: R55930
Batch : WG48852

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.55	1.1
11104-28-2	Aroclor-1221	ug/L		ND	0.55	1.1
11141-16-5	Aroclor-1232	ug/L		ND	0.55	1.1
53469-21-9	Aroclor-1242	ug/L		ND	0.55	1.1
12672-29-6	Aroclor-1248	ug/L		ND	0.55	1.1
11097-69-1	Aroclor-1254	ug/L		ND	1.1	1.1
11096-82-5	Aroclor-1260	ug/L		ND	1.1	1.1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	55.0	(13 - 154%)
Decachlorobiphenyl	50.0	(25 - 140%)

L = Reporting Limit

gin #L9810634
vember 12, 1998 03:51 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9810634-01
lient Sample ID: WEIR 102998
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

LP Extract Date: N/A
Extract Date: 11/03/98
Analysis Date: 11/05/98 Time:

Dil. Type: N/A
COC Info: N/A

Date Collected: 10/29/98

Instrument: HP9
Analyst: ECL
Lab File ID: 1255

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8081A\3510C
Run ID: R55786
Batch : WG48855

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L		ND	0.055	1.1
319-85-7	beta-BHC	ug/L		ND	0.055	1.1
319-86-8	delta-BHC	ug/L		ND	0.055	1.1
58-89-9	gamma-BHC (Lindane)	ug/L		ND	0.055	1.1
76-44-8	Heptachlor	ug/L		ND	0.055	1.1
309-00-2	Aldrin	ug/L		ND	0.055	1.1
1024-57-3	Heptachlor epoxide	ug/L		ND	0.055	1.1
959-98-8	Endosulfan I	ug/L		ND	0.055	1.1
60-57-1	Dieldrin	ug/L		ND	0.11	1.1
72-55-9	4,4'-DDE	ug/L		ND	0.11	1.1
72-20-8	Endrin	ug/L		ND	0.11	1.1
33213-65-9	Endosulfan II	ug/L		ND	0.11	1.1
72-54-8	4,4'-DDD	ug/L		ND	0.11	1.1
1031-07-8	Endosulfan sulfate	ug/L		ND	0.11	1.1
50-29-3	4,4'-DDT	ug/L		ND	0.11	1.1
72-43-5	Methoxychlor	ug/L		ND	0.55	1.1
53494-70-5	Endrin ketone	ug/L		ND	0.11	1.1
7421-93-4	Endrin aldehyde	ug/L		ND	0.11	1.1
5103-71-9	alpha Chlordane	ug/L		ND	0.055	1.1
5103-74-2	gamma Chlordane	ug/L		ND	0.055	1.1
8001-35-2	Toxaphene	ug/L		ND	1.1	1.1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	51.6	(13 - 154%)
Decachlorobiphenyl	49.3	(25 - 140%)

; = Reporting Limit

Login #L9810
November 12, 1998 03:51 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9810634-01
Client Sample ID: WEIR 102998
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/29/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/02/98
Analysis Date: 11/03/98 Time: 17:35

Instrument: HPMS4
Analyst: MLS
Lab File ID: 12113

Method: 8270C\3510C
Run ID: R55716
Batch : WG48836

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L		ND	12	2.3
111-44-4	Bis(2-Chloroethyl)ether	ug/L		ND	12	2.3
95-57-8	2-Chlorophenol	ug/L		ND	12	2.3
541-73-1	1,3-Dichlorobenzene	ug/L		ND	12	2.3
106-46-7	1,4-Dichlorobenzene	ug/L		ND	12	2.3
95-50-1	1,2-Dichlorobenzene	ug/L		ND	12	2.3
95-48-7	2-Methylphenol	ug/L		ND	12	2.3
108-60-1	bis(2-Chloroisopropyl)ether	ug/L		ND	12	2.3
106-44-5	4-Methylphenol	ug/L		ND	12	2.3
621-64-7	N-Nitroso-di-n-propylamine	ug/L		ND	12	2.3
67-72-1	Hexachloroethane	ug/L		ND	12	2.3
98-95-3	Nitrobenzene	ug/L		ND	12	2.3
78-59-1	Isophorone	ug/L		ND	12	2.3
88-75-5	2-Nitrophenol	ug/L		ND	12	2.3
105-67-9	2,4-Dimethylphenol	ug/L		ND	12	2.3
111-91-1	Bis(2-Chloroethoxy)Methane	ug/L		ND	12	2.3
120-83-2	2,4-Dichlorophenol	ug/L		ND	12	2.3
120-82-1	1,2,4-Trichlorobenzene	ug/L		ND	12	2.3
91-20-3	Naphthalene	ug/L		ND	12	2.3
106-47-8	4-Chloroaniline	ug/L		ND	12	2.3
87-68-3	Hexachlorobutadiene	ug/L		ND	12	2.3
59-50-7	4-Chloro-3-methylphenol	ug/L		ND	12	2.3
91-57-6	2-Methylnaphthalene	ug/L		ND	12	2.3
77-47-4	Hexachlorocyclopentadiene	ug/L		ND	12	2.3
88-06-2	2,4,6-Trichlorophenol	ug/L		ND	12	2.3
95-95-4	2,4,5-Trichlorophenol	ug/L		ND	58	2.3
91-58-7	2-Chloronaphthalene	ug/L		ND	12	2.3
88-74-4	2-Nitroaniline	ug/L		ND	58	2.3
131-11-3	Dimethylphthalate	ug/L		ND	12	2.3
208-96-8	Acenaphthylene	ug/L		ND	12	2.3
606-20-2	2,6-Dinitrotoluene	ug/L		ND	12	2.3
99-09-2	3-Nitroaniline	ug/L		ND	58	2.3
83-32-9	Acenaphthene	ug/L		ND	12	2.3
51-28-5	2,4-Dinitrophenol	ug/L		ND	58	2.3
100-02-7	4-Nitrophenol	ug/L		ND	58	2.3
132-64-9	Dibenzofuran	ug/L		ND	12	2.3
121-14-2	2,4-Dinitrotoluene	ug/L		ND	12	2.3
84-66-2	Diethylphthalate	ug/L		ND	12	2.3
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L		ND	12	2.3

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9810634-01
Client Sample ID: WEIR 102998
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/29/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

CLP Extract Date: N/A
Extract Date: 11/02/98
Analysis Date: 11/03/98 Time: 17:35

Instrument: HPMS4
Analyst: MLS
Lab File ID: 12113

Method: 8270C\3510C
Run ID: R55716
Batch : WG48836

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L		ND	12	2.3
100-01-6	4-Nitroaniline	ug/L		ND	58	2.3
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	58	2.3
86-30-6	N-Nitrosodiphenylamine	ug/L		ND	12	2.3
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	12	2.3
118-74-1	Hexachlorobenzene	ug/L		ND	12	2.3
87-86-5	Pentachlorophenol	ug/L		ND	58	2.3
85-01-8	Phenanthrene	ug/L		ND	12	2.3
120-12-7	Anthracene	ug/L		ND	12	2.3
86-74-8	Carbazole	ug/L		ND	12	2.3
84-74-2	Di-N-Butylphthalate	ug/L		ND	12	2.3
206-44-0	Fluoranthene	ug/L		ND	12	2.3
129-00-0	Pyrene	ug/L		ND	12	2.3
85-68-7	Butylbenzylphthalate	ug/L		ND	12	2.3
91-94-1	3,3'-Dichlorobenzidine	ug/L		ND	23	2.3
56-55-3	Benzo(a)anthracene	ug/L		ND	12	2.3
218-01-9	Chrysene	ug/L		ND	12	2.3
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	12	2.3
117-84-0	Di-n-octylphthalate	ug/L		ND	12	2.3
205-99-2	Benzo(b)fluoranthene	ug/L		ND	12	2.3
207-08-9	Benzo(k)fluoranthene	ug/L		ND	12	2.3
50-32-8	Benzo(a)pyrene	ug/L		ND	12	2.3
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L		ND	12	2.3
53-70-3	Dibenzo(a,h)Anthracene	ug/L		ND	12	2.3
191-24-2	Benzo(g,h,i)Perylene	ug/L		ND	12	2.3

SURROGATES- In Percent Recovery:

2-Fluorophenol	34.1	(21 - 100%)
Phenol-d5	23.3	(10 - 94%)
Nitrobenzene-d5	52.9	(35 - 114%)
2-Fluorobiphenyl	56.5	(43 - 116%)
2,4,6-Tribromophenol	91.9	(10 - 123%)
p-Terphenyl-d14	108	(33 - 141%)

L = Reporting Limit

KEMRON ENVIRON[illegible]TAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9810634-01
Client Sample ID: WEIR 102998
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/04/98 Time: 19:51

Dil. Type: N/A
COC Info: N/A

Date Collected: 10/29/98

Instrument: HPMS9
Analyst: SLT
Lab File ID: 9VR00090

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8260B
Run ID: R55764
Batch : WG48847

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/L		ND	10	1
74-83-9	Bromomethane	ug/L		ND	10	1
75-01-4	Vinyl chloride	ug/L		ND	10	1
75-00-3	Chloroethane	ug/L		ND	10	1
75-09-2	Methylene chloride	ug/L		ND	5.0	1
67-64-1	Acetone	ug/L		ND	10	1
75-15-0	Carbon disulfide	ug/L		ND	5.0	1
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1
75-34-3	1,1-Dichloroethane	ug/L		ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L		ND	5.0	1
67-66-3	Chloroform	ug/L		ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	1
78-93-3	2-Butanone	ug/L		ND	10	1
71-55-6	1,1,1-Trichloroethane	ug/L		ND	5.0	1
56-23-5	Carbon tetrachloride	ug/L		ND	5.0	1
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	1
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	1
79-01-6	Trichloroethene	ug/L		ND	5.0	1
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1
71-43-2	Benzene	ug/L		ND	5.0	1
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	1
75-25-2	Bromoform	ug/L		ND	5.0	1
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	1
591-78-6	2-Hexanone	ug/L		ND	10	1
127-18-4	Tetrachloroethene	ug/L		ND	5.0	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0	1
108-88-3	Toluene	ug/L		ND	5.0	1
108-90-7	Chlorobenzene	ug/L		ND	5.0	1
100-41-4	Ethyl benzene	ug/L		ND	5.0	1
100-42-5	Styrene	ug/L		ND	5.0	1
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1

SURROGATES- In Percent Recovery:

Dibromofluoromethane	99.1	(86 - 118%)
1,2-Dichloroethane-d4	99.2	(80 - 120%)
Toluene-d8	105	(88 - 110%)
p-Bromofluorobenzene	94.0	(86 - 115%)

RL = Reporting Limit

ɔgin #L9810634
ɔvember 12, 1998 03:51 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9810634-02
lient Sample ID: WEIR 102898
Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water
Collected: 10/29/98 N/A

COC Info: N/A

nalyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
ɔtal Suspended Solids.....	mg/L	28		5.0	1	N/A	DLP	11/02/98	12:00	160.2

; = Reporting Limit

Login #L9810[illegible]
November 12, 1998 03:51 pm

KEMRON ENVIRON[illegible]TAL SERVICES

Lab Sample ID: L9810634-03
Client Sample ID: WEIR 102798
Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water
Collected: 10/29/98 N/A

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	27		5.0	1	N/A	DLP	11/02/98	12:00	160.2

RL = Reporting Limit

ogin #L9810634
ovember 12, 1998 03:51 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9810634-04
lient Sample ID: BG202998
Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water
Collected: 10/29/98 N/A

COC Info: N/A

nalyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
yanide, Total.....	mg/L		ND	0.01	1	N/A	SJM	11/09/98	13:00	9010B\9014
otal Suspended Solids.....	mg/L	46		5.0	1	N/A	DLP	11/02/98	12:00	160.2

, = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9810634-04
Client Sample ID: BG202998
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/03/98
Analysis Date: 11/05/98 Time:

Dil. Type: N/A
COC Info: N/A

Date Collected: 10/29/98

Instrument: HP4
Analyst: ECL
Lab File ID: 036R0101

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8082\3510C
Run ID: R55930
Batch : WG48852

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	0.50	1
11096-82-5	Aroclor-1260	ug/L		ND	1.0	1
		ug/L		ND	1.0	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	70.0	(13 - 154%)
Decachlorobiphenyl	67.0	(25 - 140%)

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9810634-04
Client Sample ID: BG202998
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/29/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

CLP Extract Date: N/A
Extract Date: 11/03/98
Analysis Date: 11/05/98 Time:

Instrument: HP9
Analyst: ECL
Lab File ID: 1256

Method: 8081A\3510C
Run ID: R55786
Batch : WG48855

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L		ND	0.05	1
319-85-7	beta-BHC	ug/L		ND	0.05	1
319-86-8	delta-BHC	ug/L		ND	0.05	1
58-89-9	gamma-BHC (Lindane)	ug/L		ND	0.05	1
76-44-8	Heptachlor	ug/L		ND	0.05	1
309-00-2	Aldrin	ug/L		ND	0.05	1
1024-57-3	Heptachlor epoxide	ug/L		ND	0.05	1
959-98-8	Endosulfan I	ug/L		ND	0.05	1
60-57-1	Dieldrin	ug/L		ND	0.10	1
72-55-9	4,4'-DDE	ug/L		ND	0.10	1
72-20-8	Endrin	ug/L		ND	0.10	1
33213-65-9	Endosulfan II	ug/L		ND	0.10	1
72-54-8	4,4'-DDD	ug/L		ND	0.10	1
1031-07-8	Endosulfan sulfate	ug/L		ND	0.10	1
50-29-3	4,4'-DDT	ug/L		ND	0.10	1
72-43-5	Methoxychlor	ug/L		ND	0.50	1
53494-70-5	Endrin ketone	ug/L		ND	0.10	1
7421-93-4	Endrin aldehyde	ug/L		ND	0.10	1
5103-71-9	alpha Chlordane	ug/L		ND	0.05	1
5103-74-2	gamma Chlordane	ug/L		ND	0.05	1
8001-35-2	Toxaphene	ug/L		ND	1.0	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	59.3	(13 - 154%)
Decachlorobiphenyl	64.0	(25 - 140%)

L = Reporting Limit

Login #L9810[illegible]
November 12, 1998 03:51 pm

KEMRON ENVIRON[illegible]TAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9810634-04
Client Sample ID: BG202998
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/02/98
Analysis Date: 11/03/98 Time: 18:23

Dil. Type: N/A
COC Info: N/A

Date Collected: 10/29/98

Instrument: HPMS4
Analyst: MLS
Lab File ID: 12114

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8270C\3510C
Run ID: R55716
Batch : WG48836

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L		ND	10	2
111-44-4	Bis(2-Chloroethyl)ether	ug/L		ND	10	2
95-57-8	2-Chlorophenol	ug/L		ND	10	2
541-73-1	1,3-Dichlorobenzene	ug/L		ND	10	2
106-46-7	1,4-Dichlorobenzene	ug/L		ND	10	2
95-50-1	1,2-Dichlorobenzene	ug/L		ND	10	2
95-48-7	2-Methylphenol	ug/L		ND	10	2
108-60-1	bis(2-Chloroisopropyl)ether	ug/L		ND	10	2
106-44-5	4-Methylphenol	ug/L		ND	10	2
621-64-7	N-Nitroso-di-n-propylamine	ug/L		ND	10	2
67-72-1	Hexachloroethane	ug/L		ND	10	2
98-95-3	Nitrobenzene	ug/L		ND	10	2
78-59-1	Isophorone	ug/L		ND	10	2
88-75-5	2-Nitrophenol	ug/L		ND	10	2
105-67-9	2,4-Dimethylphenol	ug/L		ND	10	2
111-91-1	Bis(2-Chloroethoxy)Methane	ug/L		ND	10	2
120-83-2	2,4-Dichlorophenol	ug/L		ND	10	2
120-82-1	1,2,4-Trichlorobenzene	ug/L		ND	10	2
91-20-3	Naphthalene	ug/L		ND	10	2
106-47-8	4-Chloroaniline	ug/L		ND	10	2
87-68-3	Hexachlorobutadiene	ug/L		ND	10	2
59-50-7	4-Chloro-3-methylphenol	ug/L		ND	10	2
91-57-6	2-Methylnaphthalene	ug/L		ND	10	2
77-47-4	Hexachlorocyclopentadiene	ug/L		ND	10	2
88-06-2	2,4,6-Trichlorophenol	ug/L		ND	10	2
95-95-4	2,4,5-Trichlorophenol	ug/L		ND	50	2
91-58-7	2-Chloronaphthalene	ug/L		ND	10	2
88-74-4	2-Nitroaniline	ug/L		ND	50	2
131-11-3	Dimethylphthalate	ug/L		ND	10	2
208-96-8	Acenaphthylene	ug/L		ND	10	2
606-20-2	2,6-Dinitrotoluene	ug/L		ND	10	2
99-09-2	3-Nitroaniline	ug/L		ND	50	2
83-32-9	Acenaphthene	ug/L		ND	10	2
51-28-5	2,4-Dinitrophenol	ug/L		ND	50	2
100-02-7	4-Nitrophenol	ug/L		ND	50	2
132-64-9	Dibenzofuran	ug/L		ND	10	2
121-14-2	2,4-Dinitrotoluene	ug/L		ND	10	2
84-66-2	Diethylphthalate	ug/L		ND	10	2
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L		ND	10	2

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9810634-04
Client Sample ID: BG202998
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/29/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

CLP Extract Date: N/A
Extract Date: 11/02/98
Analysis Date: 11/03/98 Time: 18:23

Instrument: HPMS4
Analyst: MLS
Lab File ID: 12114

Method: 8270C\3510C
Run ID: R55716
Batch : WG48836

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L		ND	10	2
100-01-6	4-Nitroaniline	ug/L		ND	50	2
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	50	2
86-30-6	N-Nitrosodiphenylamine	ug/L		ND	10	2
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	10	2
118-74-1	Hexachlorobenzene	ug/L		ND	10	2
87-86-5	Pentachlorophenol	ug/L		ND	50	2
85-01-8	Phenanthrene	ug/L		ND	10	2
120-12-7	Anthracene	ug/L		ND	10	2
86-74-8	Carbazole	ug/L		ND	10	2
84-74-2	Di-N-Butylphthalate	ug/L		ND	10	2
206-44-0	Fluoranthene	ug/L		ND	10	2
129-00-0	Pyrene	ug/L		ND	10	2
85-68-7	Butylbenzylphthalate	ug/L		ND	10	2
91-94-1	3,3'-Dichlorobenzidine	ug/L		ND	20	2
56-55-3	Benzo(a)anthracene	ug/L		ND	10	2
218-01-9	Chrysene	ug/L		ND	10	2
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	10	2
117-84-0	Di-n-octylphthalate	ug/L		ND	10	2
205-99-2	Benzo(b)fluoranthene	ug/L		ND	10	2
207-08-9	Benzo(k)fluoranthene	ug/L		ND	10	2
50-32-8	Benzo(a)pyrene	ug/L		ND	10	2
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L		ND	10	2
53-70-3	Dibenzo(a,h)Anthracene	ug/L		ND	10	2
191-24-2	Benzo(g,h,i)Perylene	ug/L		ND	10	2

SURROGATES- In Percent Recovery:

2-Fluorophenol	32.6	(21 - 100%)
Phenol-d5	22.0	(10 - 94%)
Nitrobenzene-d5	55.1	(35 - 114%)
2-Fluorobiphenyl	59.2	(43 - 116%)
2,4,6-Tribromophenol	68.7	(10 - 123%)
p-Terphenyl-d14	99.8	(33 - 141%)

L = Reporting Limit

KEMRON ENVIRON[illegible]TAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9810634-04
Client Sample ID: BG202998
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/05/98 Time: 09:07

Dil. Type: N/A
COC Info: N/A

Date Collected: 10/29/98

Instrument: HPMS9
Analyst: SLT
Lab File ID: 9VR00113

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8260B
Run ID: R55830
Batch : WG48919

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/L		ND	10	1
74-83-9	Bromomethane	ug/L		ND	10	1
75-01-4	Vinyl chloride	ug/L		ND	10	1
75-00-3	Chloroethane	ug/L		ND	10	1
75-09-2	Methylene chloride	ug/L		ND	5.0	1
67-64-1	Acetone	ug/L		ND	10	1
75-15-0	Carbon disulfide	ug/L		ND	5.0	1
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1
75-34-3	1,1-Dichloroethane	ug/L		ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L		ND	5.0	1
67-66-3	Chloroform	ug/L		ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	1
78-93-3	2-Butanone	ug/L		ND	10	1
71-55-6	1,1,1-Trichloroethane	ug/L		ND	5.0	1
56-23-5	Carbon tetrachloride	ug/L		ND	5.0	1
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	1
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	1
79-01-6	Trichloroethene	ug/L		ND	5.0	1
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1
71-43-2	Benzene	ug/L		ND	5.0	1
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	1
75-25-2	Bromoform	ug/L		ND	5.0	1
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	1
591-78-6	2-Hexanone	ug/L		ND	10	1
127-18-4	Tetrachloroethene	ug/L		ND	5.0	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0	1
108-88-3	Toluene	ug/L		ND	5.0	1
108-90-7	Chlorobenzene	ug/L		ND	5.0	1
100-41-4	Ethyl benzene	ug/L		ND	5.0	1
100-42-5	Styrene	ug/L		ND	5.0	1
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1

SURROGATES- In Percent Recovery:

Dibromofluoromethane	103	(86 - 118%)
1,2-Dichloroethane-d4	101	(80 - 120%)
Toluene-d8	105	(88 - 110%)
p-Bromofluorobenzene	91.7	(86 - 115%)

RL = Reporting Limit

ogin #L9810634
ovember 12, 1998 03:51 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9810634-05
lient Sample ID: MIX102998
Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water
Collected: 10/29/98 N/A

COC Info: N/A

nalyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
yanide, Total.....	mg/L		ND	0.01	1	N/A	SJM	11/09/98	13:00	9010B\9014
otal Suspended Solids.....	mg/L	380		10	2	N/A	DLP	11/02/98	12:00	160.2

L = Reporting Limit

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9810634-05
Client Sample ID: MIX102998
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/03/98
Analysis Date: 11/05/98 Time:

Dil. Type: N/A
COC Info: N/A

Date Collected: 10/29/98

Instrument: HP4
Analyst: ECL
Lab File ID: 037R0101

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8082\3510C
Run ID: R55930
Batch : WG48852

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	1.0	1
11096-82-5	Aroclor-1260	ug/L		ND	1.0	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	64.5	(13 - 154%)
Decachlorobiphenyl	58.0	(25 - 140%)

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9810634-05
Client Sample ID: MIX102998
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/29/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

CLP Extract Date: N/A
Extract Date: 11/03/98
Analysis Date: 11/05/98 Time:

Instrument: HP9
Analyst: ECL
Lab File ID: 1257

Method: 8081A\3510C
Run ID: R55786
Batch : WG48855

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L		ND	0.05	1
319-85-7	beta-BHC	ug/L		ND	0.05	1
319-86-8	delta-BHC	ug/L		ND	0.05	1
58-89-9	gamma-BHC (Lindane)	ug/L		ND	0.05	1
76-44-8	Heptachlor	ug/L		ND	0.05	1
309-00-2	Aldrin	ug/L		ND	0.05	1
1024-57-3	Heptachlor epoxide	ug/L		ND	0.05	1
959-98-8	Endosulfan I	ug/L		ND	0.05	1
60-57-1	Dieldrin	ug/L		ND	0.10	1
72-55-9	4,4'-DDE	ug/L		ND	0.10	1
72-20-8	Endrin	ug/L		ND	0.10	1
33213-65-9	Endosulfan II	ug/L		ND	0.10	1
72-54-8	4,4'-DDD	ug/L		ND	0.10	1
1031-07-8	Endosulfan sulfate	ug/L		ND	0.10	1
50-29-3	4,4'-DDT	ug/L		ND	0.10	1
72-43-5	Methoxychlor	ug/L		ND	0.50	1
53494-70-5	Endrin ketone	ug/L		ND	0.10	1
7421-93-4	Endrin aldehyde	ug/L		ND	0.10	1
5103-71-9	alpha Chlordane	ug/L		ND	0.05	1
5103-74-2	gamma Chlordane	ug/L		ND	0.05	1
8001-35-2	Toxaphene	ug/L		ND	1.0	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	59.6	(13 - 154%)
Decachlorobiphenyl	56.0	(25 - 140%)

L = Reporting Limit

KEMRON ENVIRON[illegible]TAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9810634-05
Client Sample ID: MIX102998
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/02/98
Analysis Date: 11/03/98 Time: 19:12

Dil. Type: N/A
COC Info: N/A

Date Collected: 10/29/98

Instrument: HPMS4
Analyst: MLS
Lab File ID: 12115

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8270C\3510C
Run ID: R55716
Batch : WG48836

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L		ND	10	2
111-44-4	Bis(2-Chloroethyl)ether	ug/L		ND	10	2
95-57-8	2-Chlorophenol	ug/L		ND	10	2
541-73-1	1,3-Dichlorobenzene	ug/L		ND	10	2
106-46-7	1,4-Dichlorobenzene	ug/L		ND	10	2
95-50-1	1,2-Dichlorobenzene	ug/L		ND	10	2
95-48-7	2-Methylphenol	ug/L		ND	10	2
108-60-1	bis(2-Chloroisopropyl)ether	ug/L		ND	10	2
106-44-5	4-Methylphenol	ug/L		ND	10	2
621-64-7	N-Nitroso-di-n-propylamine	ug/L		ND	10	2
67-72-1	Hexachloroethane	ug/L		ND	10	2
98-95-3	Nitrobenzene	ug/L		ND	10	2
78-59-1	Isophorone	ug/L		ND	10	2
88-75-5	2-Nitrophenol	ug/L		ND	10	2
105-67-9	2,4-Dimethylphenol	ug/L		ND	10	2
111-91-1	Bis(2-Chloroethoxy)Methane	ug/L		ND	10	2
120-83-2	2,4-Dichlorophenol	ug/L		ND	10	2
120-82-1	1,2,4-Trichlorobenzene	ug/L		ND	10	2
91-20-3	Naphthalene	ug/L		ND	10	2
106-47-8	4-Chloroaniline	ug/L		ND	10	2
87-68-3	Hexachlorobutadiene	ug/L		ND	10	2
59-50-7	4-Chloro-3-methylphenol	ug/L		ND	10	2
91-57-6	2-Methylnaphthalene	ug/L		ND	10	2
77-47-4	Hexachlorocyclopentadiene	ug/L		ND	10	2
88-06-2	2,4,6-Trichlorophenol	ug/L		ND	10	2
95-95-4	2,4,5-Trichlorophenol	ug/L		ND	50	2
91-58-7	2-Chloronaphthalene	ug/L		ND	10	2
88-74-4	2-Nitroaniline	ug/L		ND	50	2
131-11-3	Dimethylphthalate	ug/L		ND	10	2
208-96-8	Acenaphthylene	ug/L		ND	10	2
606-20-2	2,6-Dinitrotoluene	ug/L		ND	10	2
99-09-2	3-Nitroaniline	ug/L		ND	50	2
83-32-9	Acenaphthene	ug/L		ND	10	2
51-28-5	2,4-Dinitrophenol	ug/L		ND	50	2
100-02-7	4-Nitrophenol	ug/L		ND	50	2
132-64-9	Dibenzofuran	ug/L		ND	10	2
121-14-2	2,4-Dinitrotoluene	ug/L		ND	10	2
84-66-2	Diethylphthalate	ug/L		ND	10	2
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L		ND	10	2

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9810634-05
Client Sample ID: MIX102998
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/29/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

CLP Extract Date: N/A
Extract Date: 11/02/98
Analysis Date: 11/03/98 Time: 19:12

Instrument: HPMS4
Analyst: MLS
Lab File ID: 12115

Method: 8270C\3510C
Run ID: R55716
Batch : WG48836

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L		ND	10	2
100-01-6	4-Nitroaniline	ug/L		ND	50	2
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	50	2
86-30-6	N-Nitrosodiphenylamine	ug/L		ND	10	2
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	10	2
118-74-1	Hexachlorobenzene	ug/L		ND	10	2
87-86-5	Pentachlorophenol	ug/L		ND	50	2
85-01-8	Phenanthrene	ug/L		ND	10	2
120-12-7	Anthracene	ug/L		ND	10	2
86-74-8	Carbazole	ug/L		ND	10	2
84-74-2	Di-N-Butylphthalate	ug/L		ND	10	2
206-44-0	Fluoranthene	ug/L		ND	10	2
129-00-0	Pyrene	ug/L		ND	10	2
85-68-7	Butylbenzylphthalate	ug/L		ND	10	2
91-94-1	3,3'-Dichlorobenzidine	ug/L		ND	20	2
56-55-3	Benzo(a)anthracene	ug/L		ND	10	2
218-01-9	Chrysene	ug/L		ND	10	2
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	10	2
117-84-0	Di-n-octylphthalate	ug/L		ND	10	2
205-99-2	Benzo(b)fluoranthene	ug/L		ND	10	2
207-08-9	Benzo(k)fluoranthene	ug/L		ND	10	2
50-32-8	Benzo(a)pyrene	ug/L		ND	10	2
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L		ND	10	2
53-70-3	Dibenzo(a,h)Anthracene	ug/L		ND	10	2
191-24-2	Benzo(g,h,i)Perylene	ug/L		ND	10	2

SURROGATES- In Percent Recovery:

2-Fluorophenol	31.6	(21 - 100%)
Phenol-d5	21.4	(10 - 94%)
Nitrobenzene-d5	53.0	(35 - 114%)
2-Fluorobiphenyl	56.6	(43 - 116%)
2,4,6-Tribromophenol	68.0	(10 - 123%)
p-Terphenyl-d14	86.4	(33 - 141%)

ɔ = Reporting Limit

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9810634-05
Client Sample ID: MIX102998
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 10/29/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/04/98 Time: 19:46

Instrument: HPMS2
Analyst: SLT
Lab File ID: 2VR27383

Method: 8260B
Run ID: R55812
Batch : WG48883

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/L		ND	10	1
74-83-9	Bromomethane	ug/L		ND	10	1
75-01-4	Vinyl chloride	ug/L		ND	10	1
75-00-3	Chloroethane	ug/L		ND	10	1
75-09-2	Methylene chloride	ug/L		ND	5.0	1
67-64-1	Acetone	ug/L		ND	10	1
75-15-0	Carbon disulfide	ug/L		ND	5.0	1
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1
75-34-3	1,1-Dichloroethane	ug/L		ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L		ND	5.0	1
67-66-3	Chloroform	ug/L		ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	1
78-93-3	2-Butanone	ug/L		ND	10	1
71-55-6	1,1,1-Trichloroethane	ug/L		ND	5.0	1
56-23-5	Carbon tetrachloride	ug/L		ND	5.0	1
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	1
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	1
79-01-6	Trichloroethene	ug/L		ND	5.0	1
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1
71-43-2	Benzene	ug/L		ND	5.0	1
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	1
75-25-2	Bromoform	ug/L		ND	5.0	1
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	1
591-78-6	2-Hexanone	ug/L		ND	10	1
127-18-4	Tetrachloroethene	ug/L		ND	5.0	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0	1
108-88-3	Toluene	ug/L		ND	5.0	1
108-90-7	Chlorobenzene	ug/L		ND	5.0	1
100-41-4	Ethyl benzene	ug/L		ND	5.0	1
100-42-5	Styrene	ug/L		ND	5.0	1
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1

SURROGATES- In Percent Recovery:

Dibromofluoromethane	95.0	(86 - 118%)
1,2-Dichloroethane-d4	98.9	(80 - 120%)
Toluene-d8	93.5	(88 - 110%)
p-Bromofluorobenzene	92.2	(86 - 115%)

L = Reporting Limit

Order #: 98-10-634
November 12, 1998 03:51 pm

KEMRON ENVIRONMENTAL SERVICES
WORK GROUPS

Work Group	Run ID	Sample	Dil Type	Matrix	Product	Method	Analyst	Date Collected	Run Date	Run Time	Department
WG48694	R55716	L9810634-01		Water	TCL Semivolatiles	8270C\3510C	MLS	29-OCT-1998	03-NOV-1998	17:35	Extraction
WG48694	R55716	L9810634-04		Water	TCL Semivolatiles	8270C\3510C	MLS	29-OCT-1998	03-NOV-1998	18:23	Extraction
WG48694	R55716	L9810634-05		Water	TCL Semivolatiles	8270C\3510C	MLS	29-OCT-1998	03-NOV-1998	19:12	Extraction
WG48766	R55786	L9810634-01		Water	Organochlorine Pesticides	8081A\3510C	ECL	29-OCT-1998	05-NOV-1998		Extraction
WG48766	R55786	L9810634-04		Water	Organochlorine Pesticides	8081A\3510C	ECL	29-OCT-1998	05-NOV-1998		Extraction
WG48766	R55786	L9810634-05		Water	Organochlorine Pesticides	8081A\3510C	ECL	29-OCT-1998	05-NOV-1998		Extraction
WG48767	R55930	L9810634-01		Water	PCB's (Water)	8082\3510C	ECL	29-OCT-1998	05-NOV-1998		Extraction
WG48767	R55930	L9810634-04		Water	PCB's (Water)	8082\3510C	ECL	29-OCT-1998	05-NOV-1998		Extraction
WG48767	R55930	L9810634-05		Water	PCB's (Water)	8082\3510C	ECL	29-OCT-1998	05-NOV-1998		Extraction
WG48778	R55642	L9810634-01		Water	Total Suspended Solids	160.2	DLP	29-OCT-1998	02-NOV-1998	12:00	Conventionals
WG48778	R55642	L9810634-02		Water	Total Suspended Solids	160.2	DLP	29-OCT-1998	02-NOV-1998	12:00	Conventionals
WG48778	R55642	L9810634-03		Water	Total Suspended Solids	160.2	DLP	29-OCT-1998	02-NOV-1998	12:00	Conventionals
WG48778	R55642	L9810634-04		Water	Total Suspended Solids	160.2	DLP	29-OCT-1998	02-NOV-1998	12:00	Conventionals
WG48778	R55642	L9810634-05		Water	Total Suspended Solids	160.2	DLP	29-OCT-1998	02-NOV-1998	12:00	Conventionals
WG48836	R55716	L9810634-01		Water	TCL Semivolatiles	8270C\3510C	MLS	29-OCT-1998	03-NOV-1998	17:35	Semivolatile - GC/MS
WG48836	R55716	L9810634-04		Water	TCL Semivolatiles	8270C\3510C	MLS	29-OCT-1998	03-NOV-1998	18:23	Semivolatile - GC/MS
WG48836	R55716	L9810634-05		Water	TCL Semivolatiles	8270C\3510C	MLS	29-OCT-1998	03-NOV-1998	19:12	Semivolatile - GC/MS
WG48847	R55764	L9810634-01		Water	TCL Volatiles	8260B	SLT	29-OCT-1998	04-NOV-1998	19:51	Volatile - GC/MS
WG48852	R55930	L9810634-01		Water	PCB's (Water)	8082\3510C	ECL	29-OCT-1998	05-NOV-1998		Semivolatile - GC
WG48852	R55930	L9810634-04		Water	PCB's (Water)	8082\3510C	ECL	29-OCT-1998	05-NOV-1998		Semivolatile - GC
WG48852	R55930	L9810634-05		Water	PCB's (Water)	8082\3510C	ECL	29-OCT-1998	05-NOV-1998		Semivolatile - GC
WG48855	R55786	L9810634-01		Water	Organochlorine Pesticides	8081A\3510C	ECL	29-OCT-1998	05-NOV-1998		Semivolatile - GC
WG48855	R55786	L9810634-04		Water	Organochlorine Pesticides	8081A\3510C	ECL	29-OCT-1998	05-NOV-1998		Semivolatile - GC
WG48855	R55786	L9810634-05		Water	Organochlorine Pesticides	8081A\3510C	ECL	29-OCT-1998	05-NOV-1998		Semivolatile - GC
WG48883	R55812	L9810634-05		Water	TCL Volatiles	8260B	SLT	29-OCT-1998	04-NOV-1998	19:46	Volatile - GC/MS
WG48919	R55830	L9810634-04		Water	TCL Volatiles	8260B	SLT	29-OCT-1998	05-NOV-1998	09:07	Volatile - GC/MS
WG49143	R55960	L9810634-01		Water	Cyanide, Total	9010B\9014	SJM	29-OCT-1998	09-NOV-1998	13:00	Conventionals
WG49143	R55960	L9810634-04		Water	Cyanide, Total	9010B\9014	SJM	29-OCT-1998	09-NOV-1998	13:00	Conventionals
WG49143	R55960	L9810634-05		Water	Cyanide, Total	9010B\9014	SJM	29-OCT-1998	09-NOV-1998	13:00	Conventionals

KEMRON ANALYST LIST

Ohio Valley Laboratory

10/28/98

ALC -- Ann L. Clark
BAD -- Becky A. Diehl
CEB -- Chad E. Barnes
CDB -- Christy D. Burton
CMS -- Crystal M. Stevens
CRC -- Carla R. Cochran
DIH -- Deanna I. Hesson
DKM -- Dewey K. Miller
DLN -- Deanna L. Norton
DLP -- Dorothy L. Payne
ECL -- Eric C. Lawson
FEH -- Fay E. Harmon
HV -- Hema Vilasagar
JLH -- Janice L. Holland
JWR -- John W. Richards
JYH -- Ji Y. Hu
KHA -- Kim H. Archer
KMS -- Kevin M. Stutler
KRA -- Kathy R. Albertson
MDA -- Mike D. Albertson
MDC -- Michael D. Cochran
MES -- Mary E. Schilling
MLS -- Michael L. Schimmel
MMB -- Maren M. Beery
RDC -- Rebecca D. Cutlip
RDS -- Rebecca D. Sutton
REF -- Ron E. Fertile
REK -- Robert E. Kyer
RSS -- Regina S. Simmons
RWC -- Rodney W. Campbell
SJK -- Sindy J. Kinney
SJM -- Shawn J. Marshall
SLP -- Sheri L. Pfalzgraf
SLT -- Stephanie L. Tepe
SMW -- Shauna M. Welch
SPL -- Steve P. Learn
TJW -- Thomas J. Ware
TRS -- Todd R. Stack
VC -- Vicki Collier
VMN -- Vincent M. Nedeff

KEMRON Environmental Services, Inc.
LIST OF VALID QUALIFIERS (qual)
March 9, 1998

Qualifier	Description
(A)	See the report narrative
(B)	See the report narrative
(C)	See the report narrative
+	Correlation coefficient for the MSA is less than 0.995
<	Less than
>	Greater than
B	Present in the method blank
C	Confirmed by GC/MS
*	Surrogate or spike compound out of range
CG	Confluent growth
D	The analyte was quantified at a secondary dilution factor
DL	Surrogate or spike was diluted out
E	Estimated concentration due to sample matrix interference
F	Present below nominal reporting limit (AFCEE only)
FL	Free liquid
I	Semiquantitative result, out of instrument calibration range
J	Present below nominal reporting limit
L	Sample reporting limits elevated due to matrix interference
M	Duplicate injection precision not met

Qualifier	Description
N	Tentatively Identified Compound (TIC)
NA	Not applicable
ND	Not detected at or above the reporting limit (RL)
NF	Not found
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentration > 25% difference between the two GC columns
QNS	Quantity not sufficient to perform analysis
R	Analyte exceeds regulatory limit
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TNTC	Too numerous to count
U	Analyzed for but not detected
W	Post-digestion spike for furnace AA out of control limits
X	Can not be resolved from isomer. See below.

Special Notes for Organic Analytes

1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264 Appendix IX. They are not always achievable for every compound and are matrix dependent.

ORGANIC QA/QC

Kemron
ENVIRONMENTAL SERVICES

KEMRON ENVIRONMENTAL SERVICES , OVL
SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP : WG48836
METHOD : 8270
MATRIX : WATER
CONCENTRATION UNITS : UG/L
PREP WORK GRP : WG48694

EXT DATE : 11/2/98
BENCH SHEET : V104P32
BLK FLNM : 12107
LCS FLNM: 12108

RUN DATE : 11/3/98
SMPL ID : NA
SMPL FLNM : NA
MS FLNM : NA
MSD FLNM : NA

INSTRUMENT : HPMS4
ANALYST : MLS

ANALYTE	CONCENTRATION , ug/L								PERCENT RECOVERY , %									PERCENT			BEYOND LIMITS				
	RDL	BLANK	LCS SPIKE ADDED	LCS	SAMPLE	MS SPIKE ADDED	MS	MSD	BLANK	LCS	LCS LCL	LCS UCL	SAMPLE	MS	MSD	MS LCL	MS UCL	MSD RPD	RPD UCL	RPD > LIMIT	SAMPLE	BLANK	LCS	MS	MSD
PYRIDINE	5.0	ND	100	24.9	ND	200	NA	NA	NA	24.9	5	150	NA	NA	NA	5	150	NA	40						
N-NITROSODIMETHYLAMINE	5.0	ND	100	33.4	ND	200	NA	NA	NA	33.4	5	150	NA	NA	NA	5	150	NA	40						
ANILINE	10.0	ND	100	37.6	ND	200	NA	NA	NA	37.6	5	150	NA	NA	NA	5	150	NA	40						
PHENOL	5.0	ND	100	21.6	ND	200	NA	NA	NA	21.6	5	112	NA	NA	NA	5	112	NA	40						
BIS(2-CHLOROETHYL)ETHER	5.0	ND	100	47.4	ND	200	NA	NA	NA	47.4	12	158	NA	NA	NA	12	158	NA	40						
2-CHLOROPHENOL	5.0	ND	100	44.7	ND	200	NA	NA	NA	44.7	23	134	NA	NA	NA	23	134	NA	40						
1,3-DICHLOROBENZENE	5.0	ND	100	41.9	ND	200	NA	NA	NA	41.9	5	172	NA	NA	NA	5	172	NA	40						
1,4-DICHLOROBENZENE	10.0	ND	100	43.7	ND	200	NA	NA	NA	43.7	20	124	NA	NA	NA	20	124	NA	40						
BENZYL ALCOHOL	5.0	ND	100	44.5	ND	200	NA	NA	NA	44.5	5	150	NA	NA	NA	5	150	NA	40						
1,2-DICHLOROBENZENE	5.0	ND	100	44.5	ND	200	NA	NA	NA	44.5	32	129	NA	NA	NA	32	129	NA	40						
2-METHYLPHENOL	5.0	ND	100	44.9	ND	200	NA	NA	NA	44.9	5	150	NA	NA	NA	5	150	NA	40						
BIS(2-CHLOROISOPROPYL)ETH	5.0	ND	100	47.7	ND	200	NA	NA	NA	47.7	36	166	NA	NA	NA	36	166	NA	40						
3- & 4-METHYLPHENOL	5.0	ND	100	41.2	ND	200	NA	NA	NA	41.2	5	150	NA	NA	NA	5	150	NA	40						
N-NITROSO-DI-N-PROPYLAMINE	5.0	ND	100	51.1	ND	200	NA	NA	NA	51.1	5	230	NA	NA	NA	5	230	NA	40						
HEXACHLOROETHANE	5.0	ND	100	44.2	ND	200	NA	NA	NA	44.2	40	113	NA	NA	NA	40	113	NA	40						
NITROBENZENE	5.0	ND	100	50.9	ND	200	NA	NA	NA	50.9	35	180	NA	NA	NA	35	180	NA	40						
ISOPHORONE	5.0	ND	100	55.1	ND	200	NA	NA	NA	55.1	21	196	NA	NA	NA	21	196	NA	40						
2-NITROPHENOL	5.0	ND	100	51.6	ND	200	NA	NA	NA	51.6	29	182	NA	NA	NA	29	182	NA	40						
2,4-DIMETHYLPHENOL	5.0	ND	100	56.9	ND	200	NA	NA	NA	56.9	32	119	NA	NA	NA	32	119	NA	40						
BIS(2-CHLOROETHOXY)METHA	25.0	ND	100	47.7	ND	200	NA	NA	NA	47.7	33	184	NA	NA	NA	33	184	NA	40						
BENZOIC ACID	5.0	ND	100	0.0	ND	200	NA	NA	NA	0.0	5	150	NA	NA	NA	5	150	NA	40			L			
2,4-DICHLOROPHENOL	5.0	ND	100	49.2	ND	200	NA	NA	NA	49.2	39	135	NA	NA	NA	39	135	NA	40						
1,2,4-TRICHLOROBENZENE	5.0	ND	100	45.5	ND	200	NA	NA	NA	45.5	44	142	NA	NA	NA	44	142	NA	40						
NAPHTHALENE	5.0	ND	100	48.4	ND	200	NA	NA	NA	48.4	21	133	NA	NA	NA	21	133	NA	40						
4-CHLOROANILINE	5.0	ND	100	48.2	ND	200	NA	NA	NA	48.2	5	150	NA	NA	NA	5	150	NA	40						
HEXACHLOROBUTADIENE	10.0	ND	100	47.1	ND	200	NA	NA	NA	47.1	24	116	NA	NA	NA	24	116	NA	40						
4-CHLORO-3-METHYLPHENOL	5.0	ND	100	53.0	ND	200	NA	NA	NA	53.0	22	147	NA	NA	NA	22	147	NA	40						
2-METHYLNAPHTHALENE	5.0	ND	100	49.4	ND	200	NA	NA	NA	49.4	5	150	NA	NA	NA	5	150	NA	40						
HEXACHLOROCYCLOPENTADIE	5.0	ND	100	43.3	ND	200	NA	NA	NA	43.3	5	150	NA	NA	NA	5	150	NA	40						
2,4,6-TRICHLOROPHENOL	25.0	ND	100	50.9	ND	200	NA	NA	NA	50.9	37	144	NA	NA	NA	37	144	NA	40						
2,4,5-TRICHLOROPHENOL	5.0	ND	100	53.5	ND	200	NA	NA	NA	53.5	5	150	NA	NA	NA	5	150	NA	40						
2-CHLORONAPHTHALENE	25.0	ND	100	49.1	ND	200	NA	NA	NA	49.1	60	118	NA	NA	NA	60	118	NA	40			L			
2-NITROANILINE	5.0	ND	100	53.2	ND	200	NA	NA	NA	53.2	5	150	NA	NA	NA	5	150	NA	40						
DIMETHYLPHTHALATE	5.0	ND	100	67.2	ND	200	NA	NA	NA	67.2	5	112	NA	NA	NA	5	112	NA	40						
ACENAPHTHYLENE	5.0	ND	100	52.3	ND	200	NA	NA	NA	52.3	33	145	NA	NA	NA	33	145	NA	40						
2,6-DINITROTOLUENE	5.0	ND	100	97.4	ND	200	NA	NA	NA	97.4	50	158	NA	NA	NA	50	158	NA	40						
3-NITROANILINE	25.0	ND	100	78.4	ND	200	NA	NA	NA	78.4	5	150	NA	NA	NA	5	150	NA	40						
ACENAPHTHENE	5.0	ND	100	57.5	ND	200	NA	NA	NA	57.5	47	145	NA	NA	NA	47	145	NA	40						
2,4-DINITROPHENOL	25.0	ND	100	75.8	ND	200	NA	NA	NA	75.8	5	191	NA	NA	NA	5	191	NA	40						
4-NITROPHENOL	25.0	ND	100	53.8	ND	200	NA	NA	NA	53.8	5	132	NA	NA	NA	5	132	NA	40						
DIBENZOFURAN	5.0	ND	100	57.0	ND	200	NA	NA	NA	57.0	5	150	NA	NA	NA	5	150	NA	40						
2,4-DINITROTOLUENE	5.0	ND	100	97.4	ND	200	NA	NA	NA	97.4	39	139	NA	NA	NA	39	139	NA	40						

NOTES & DEFINITIONS
NA = NOT APPLICABLE
ND = NOT DETECTED

NS = NOT SPIKED
L= below QC limit
H= above QC limit

RDL=REPORTING DETECTION LIMIT

KEMRON ENVIRONMENTAL SERVICES , OVL
SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP : WG48836
METHOD : 8270
MATRIX : WATER
CONCENTRATION UNITS : UG/L
PREP WORK GRP : WG48694

EXT DATE : 11/2/98
BENCH SHEET : V104P32
BLK FLNM : 12107
LCS FLNM: 12108

RUN DATE : 11/3/98
SMPL ID : NA
SMPL FLNM : NA
MS FLNM : NA
MSD FLNM : NA

INSTRUMENT : HPMS4
ANALYST : MLS

ANALYTE	CONCENTRATION , ug / L								PERCENT RECOVERY , %									PERCENT			BEYOND LIMITS				
	RDL	BLANK	LCS SPIKE ADDED	LCS	SAMPLE	MS SPIKE ADDED	MS	MSD	BLANK	LCS	LCS LCL	LCS UCL	SAMPLE	MS	MSD	MS LCL	MS UCL	MSD RPD	RPD UCL	BEYOND RPD LIMIT	SAMPLE	BLANK	LCS	MS	MSD
DIETHYLPHTHALATE	5.0	ND	100	84.5	ND	200	NA	NA	NA	84.5	5	114	NA	NA	NA	5	114	NA	40						
FLUORENE	5.0	ND	100	63.9	ND	200	NA	NA	NA	63.9	25	158	NA	NA	NA	25	158	NA	40						
4-CHLOROPHENYL-PHENYL ET	5.0	ND	100	59.5	ND	200	NA	NA	NA	59.5	59	121	NA	NA	NA	59	121	NA	40						
4-NITROANILINE	25.0	ND	100	78.4	ND	200	NA	NA	NA	78.4	5	150	NA	NA	NA	5	150	NA	40						
1,2-DIPHENYLHYDRAZINE *	5.0	ND	100	56.1	ND	200	NA	NA	NA	56.1	5	150	NA	NA	NA	5	150	NA	40						
4,6-DINITRO-2-METHYLPHENOL	25.0	ND	100	95.5	ND	200	NA	NA	NA	95.5	5	181	NA	NA	NA	5	181	NA	40						
N-NITROSODIPHENYLAMINE **	5.0	ND	100	76.6	ND	200	NA	NA	NA	76.6	5	150	NA	NA	NA	5	150	NA	40						
4-BROMOPHENYL-PHENYL ETH	5.0	ND	100	63.9	ND	200	NA	NA	NA	63.9	53	127	NA	NA	NA	53	127	NA	40						
HEXACHLOROBENZENE	5.0	ND	100	86.9	ND	200	NA	NA	NA	86.9	5	152	NA	NA	NA	5	152	NA	40						
PENTACHLOROPHENOL	25.0	ND	100	91.6	ND	200	NA	NA	NA	91.6	14	176	NA	NA	NA	14	176	NA	40						
PHENANTHRENE	5.0	ND	100	85.6	ND	200	NA	NA	NA	85.6	54	120	NA	NA	NA	54	120	NA	40						
ANTHRACENE	5.0	ND	100	88.2	ND	200	NA	NA	NA	88.2	27	133	NA	NA	NA	27	133	NA	40						
CARBAZOLE	5.0	ND	100	85.7	ND	200	NA	NA	NA	85.7	5	150	NA	NA	NA	5	150	NA	40						
DI-N-BUTYLPHTHALATE	5.0	ND	100	81.4	ND	200	NA	NA	NA	81.4	1	118	NA	NA	NA	1	118	NA	40						
FLUORANTHENE	5.0	ND	100	102.4	ND	200	NA	NA	NA	102.4	26	137	NA	NA	NA	26	137	NA	40						
PYRENE	5.0	ND	100	98.2	ND	200	NA	NA	NA	98.2	52	115	NA	NA	NA	52	115	NA	40						
BUTYLBENZYLPHTHALATE	5.0	ND	100	108.9	ND	200	NA	NA	NA	108.9	5	152	NA	NA	NA	5	152	NA	40						
BENZO(A)ANTHRACENE	10.0	ND	100	98.7	ND	200	NA	NA	NA	98.7	5	262	NA	NA	NA	5	262	NA	40						
3,3'-DICHLOROBENZIDINE	5.0	ND	100	95.2	ND	200	NA	NA	NA	95.2	33	143	NA	NA	NA	33	143	NA	40						
CHRYSENE	5.0	ND	100	99.2	ND	200	NA	NA	NA	99.2	17	168	NA	NA	NA	17	168	NA	40						
BIS(2-ETHYLHEXYL)PHTHALATE	5.0	ND	100	107.4	ND	200	NA	NA	NA	107.4	8	158	NA	NA	NA	8	158	NA	40						
DI-N-OCTYLPHTHALATE	5.0	ND	100	112.7	ND	200	NA	NA	NA	112.7	4	146	NA	NA	NA	4	146	NA	40						
BENZO(B)FLUORANTHENE	5.0	ND	100	110.9	ND	200	NA	NA	NA	110.9	24	159	NA	NA	NA	24	159	NA	40						
BENZO(K)FLUORANTHENE	5.0	ND	100	116.6	ND	200	NA	NA	NA	116.6	11	162	NA	NA	NA	11	162	NA	40						
BENZO(A)PYRENE	5.0	ND	100	114.4	ND	200	NA	NA	NA	114.4	17	163	NA	NA	NA	17	163	NA	40						
INDENO(1,2,3-CD)PYRENE	5.0	ND	100	108.0	ND	200	NA	NA	NA	108.0	5	171	NA	NA	NA	5	171	NA	40						
DIBENZ(A,H)ANTHRACENE	5.0	ND	100	117.9	ND	200	NA	NA	NA	117.9	5	227	NA	NA	NA	5	227	NA	40						
BENZO(G,H,I)PERYLENE	5.0	ND	100	110.6	ND	200	NA	NA	NA	110.6	5	219	NA	NA	NA	5	219	NA	40						
SURROGATES																									
2-FLUOROPHENOL		32.1	100	32.2	NA	100	NA	NA	32.1	32.2	21	100	NA	NA	NA	21	100								
PHENOL - D5		21.3	100	21.9	NA	100	NA	NA	21.3	21.9	10	94	NA	NA	NA	10	94								
NITROBENZENE - D5		26.9	50	26.0	NA	50	NA	NA	53.7	52.0	35	114	NA	NA	NA	35	114								
2-FLUOROBIPHENYL		26.5	50	26.4	NA	50	NA	NA	52.9	52.8	43	116	NA	NA	NA	43	116								
2,4,6-TRIBROMOPHENOL		60.5	100	93.2	NA	100	NA	NA	60.5	93.2	10	123	NA	NA	NA	10	123								
p-TERPHENYL - D14		63.7	50	60.7	NA	50	NA	NA	127.3	121.3	33	141	NA	NA	NA	33	141								

NOTES & DEFINITIONS : NS = NOT SPIKED

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG48847	Run Date:	11/4/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_9	SMPL Num:	10-505-01	SMPL DF:	1
Matrix:	Water	BLK FLNM:	9BK00073	SMPL FLNM:	9RU00078	MS DF:	1
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	9RU00079	MSD DF:	1
		LCS FLNM:	9QC00074	MSD FLNM:	9RU00080		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
dichlorodifluoromethane	10.0	ND	ND	13.3	NA	20.0	ND	13.3	12.9	20.0	66.5	NA	38.0	148.0	66.5	64.5	60.0	140.0	3.1	20.0
chloromethane	10.0	ND	ND	17.2	NA	20.0	ND	14.5	14.6	20.0	86.0	NA	56.0	132.0	72.5	73.0	D	273.0	0.7	20.0
vinyl chloride	10.0	ND	ND	20.7	NA	20.0	ND	17.0	16.9	20.0	103.5	NA	68.0	126.0	85.0	84.5	D	251.0	0.6	20.0
bromomethane	10.0	ND	ND	22.6	NA	20.0	ND	11.7	13.5	20.0	113.0	NA	55.0	138.0	58.5	67.5	D	242.0	14.3	20.0
chloroethane	10.0	ND	ND	18.8	NA	20.0	ND	19.3	18.7	20.0	94.0	NA	70.0	128.0	96.5	93.5	14.0	230.0	3.2	20.0
trichlorofluoromethane	10.0	ND	ND	19.6	NA	20.0	ND	20.7	20.4	20.0	98.0	NA	70.0	127.0	103.5	102.0	17.0	181.0	1.5	20.0
freon 113	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	70.0	130.0	NA	20.0
acetone	100.0	ND	ND	16.3	NA	20.0	ND	17.4	15.8	20.0	81.5	NA	44.0	114.0	87.0	79.0	70.0	130.0	9.6	20.0
1,1-dichloroethene	5.0	ND	ND	21.3	NA	20.0	ND	21.9	21.7	20.0	106.5	NA	69.0	144.0	109.5	108.5	D	234.0	0.9	20.0
iodomethane	NTC	ND	ND	20.5	NA	20.0	ND	13.2	16.8	20.0	102.5	NA	NA	NA	66.0	84.0	70.0	130.0	24.0	20.0
methylene chloride	5.0	ND	ND	21.0	NA	20.0	ND	21.7	21.2	20.0	105.0	NA	71.0	128.0	108.5	106.0	D	221.0	2.3	20.0
carbon disulfide	5.0	ND	ND	19.9	NA	20.0	ND	20.6	20.4	20.0	99.5	NA	67.0	136.0	103.0	102.0	70.0	130.0	1.0	20.0
acrylonitrile	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	70.0	130.0	NA	20.0
trans-1,2-dichloroethene	5.0	ND	ND	23.2	NA	20.0	ND	23.6	23.2	20.0	116.0	NA	85.0	133.0	118.0	116.0	54.0	156.0	1.7	20.0
vinyl acetate	10.0	ND	ND	18.1	NA	20.0	ND	19.8	18.5	20.0	90.5	NA	9.0	236.0	99.0	92.5	9.0	236.0	6.8	20.0
1,1-dichloroethane	5.0	ND	ND	21.4	NA	20.0	ND	21.9	21.6	20.0	107.0	NA	82.0	124.0	109.5	108.0	59.0	155.0	1.4	20.0
2-butanone	100.0	ND	ND	18.5	NA	20.0	ND	19.4	17.3	20.0	92.5	NA	43.0	140.0	97.0	86.5	70.0	130.0	11.4	20.0
2,2-dichloropropane	5.0	ND	ND	22.0	NA	20.0	ND	22.6	22.3	20.0	110.0	NA	77.0	126.0	113.0	111.5	60.0	140.0	1.3	20.0
cis-1,2-dichloroethene	5.0	ND	ND	20.7	NA	20.0	ND	21.0	20.8	20.0	103.5	NA	69.0	130.0	105.0	104.0	60.0	140.0	1.0	20.0
chloroform	5.0	ND	ND	21.5	NA	20.0	ND	21.8	21.6	20.0	107.5	NA	83.0	121.0	109.0	108.0	51.0	138.0	0.9	20.0

tes and Definitions:

L = Reporting Detection Limit
ND = Not Detected
(= Method Blank
NA = Not Applicable
(2 = Second Method Blank
S = Laboratory Control Sample
S2 = Second Leboratory Control Sample
IPL = Sample Results
;/MSD = Matrix Spike / Matrix Spike Duplicate
L = Lower Control Limit
L = Upper Control Limit
D = Relative Percent Difference

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG48847	Run Date:	11/4/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_9	SMPL Num:	10-505-01	SMPL DF:	1
Matrix:	Water	BLK FLNM:	9BK00073	SMPL FLNM:	9RU00078	MS DF:	1
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	9RU00079	MSD DF:	1
		LCS FLNM:	9QC00074	MSD FLNM:	9RU00080		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
bromochloromethane	5.0	ND	ND	21.6	NA	20.0	ND	22.1	21.4	20.0	108.0	NA	85.0	118.0	110.5	107.0	60.0	140.0	3.2	20.0
1,1,1-trichloroethane	5.0	ND	ND	21.4	NA	20.0	ND	21.8	21.6	20.0	107.0	NA	74.0	125.0	109.0	108.0	52.0	162.0	0.9	20.0
1,1-dichloropropene	5.0	ND	ND	23.4	NA	20.0	ND	24.1	23.8	20.0	117.0	NA	85.0	126.0	120.5	119.0	60.0	140.0	1.3	20.0
carbon tetrachloride	5.0	ND	ND	22.0	NA	20.0	ND	23.0	22.4	20.0	110.0	NA	73.0	129.0	115.0	112.0	70.0	140.0	2.6	20.0
1,2-dichloroethane	5.0	ND	ND	21.0	NA	20.0	ND	21.1	20.8	20.0	105.0	NA	76.0	123.0	105.5	104.0	49.0	155.0	1.4	20.0
benzene	5.0	ND	ND	21.3	NA	20.0	ND	21.4	21.0	20.0	106.5	NA	86.0	119.0	107.0	105.0	37.0	151.0	1.9	20.0
trichloroethene	5.0	ND	ND	21.5	NA	20.0	ND	21.3	21.2	20.0	107.5	NA	82.0	120.0	106.5	106.0	71.0	157.0	0.5	20.0
1,2-dichloropropane	5.0	ND	ND	21.1	NA	20.0	ND	21.3	21.0	20.0	105.5	NA	74.0	126.0	106.5	105.0	D	210.0	1.4	20.0
bromodichloromethane	5.0	ND	ND	22.0	NA	20.0	ND	22.2	21.8	20.0	110.0	NA	74.0	126.0	111.0	109.0	35.0	155.0	1.8	20.0
dibromomethane	5.0	ND	ND	21.1	NA	20.0	ND	21.6	21.0	20.0	105.5	NA	78.0	125.0	108.0	105.0	60.0	140.0	2.8	20.0
2-chloroethylvinyl-ether	10.0	ND	ND	19.5	NA	20.0	ND	ND	ND	20.0	97.5	NA	68.0	144.0	NA	NA	70.0	130.0	NA	20.0
4-methyl-2-pentanone	10.0	ND	ND	18.9	NA	20.0	ND	19.9	18.0	20.0	94.5	NA	70.0	127.0	99.5	90.0	70.0	130.0	10.0	20.0
cis-1,3-dichloropropene	5.0	ND	ND	22.1	NA	20.0	ND	22.2	22.0	20.0	110.5	NA	77.0	123.0	111.0	110.0	D	227.0	0.9	20.0
toluene	5.0	ND	ND	21.5	NA	20.0	ND	21.8	21.6	20.0	107.5	NA	83.0	119.0	108.0	108.0	47.0	150.0	0.0	20.0
trans-1,3-dichloropropene	5.0	ND	ND	21.7	NA	20.0	ND	21.5	20.8	20.0	108.5	NA	74.0	124.0	107.5	104.0	17.0	183.0	3.3	20.0
1,1,2-trichloroethane	5.0	ND	ND	21.1	NA	20.0	ND	21.0	20.6	20.0	105.5	NA	72.0	119.0	105.0	103.0	52.0	150.0	1.9	20.0
2-hexanone	10.0	ND	ND	18.5	NA	20.0	ND	19.2	17.7	20.0	92.5	NA	55.0	114.0	96.0	88.5	70.0	130.0	8.1	20.0
1,3-dichloropropane	5.0	ND	ND	20.9	NA	20.0	ND	21.0	20.5	20.0	104.5	NA	73.0	122.0	105.0	102.5	60.0	140.0	2.4	20.0
tetrachloroethene	5.0	ND	ND	21.6	NA	20.0	ND	21.2	21.1	20.0	108.0	NA	82.0	120.0	106.0	105.5	64.0	148.0	0.5	20.0
dibromochloromethane	5.0	ND	ND	21.7	NA	20.0	ND	21.6	21.3	20.0	108.5	NA	72.0	121.0	108.0	106.5	53.0	149.0	1.4	20.0

Notes and Definitions:

RDL = Reporting Detection Limit
BLK = Method Blank
BLK2 = Second Method Blank
LCS = Laboratory Control Sample
LCS2 = Second Laboratory Control Sample
SMPL = Sample Results
MS/MSD = Matrix Spike / Matrix Spike Duplicate
LCL = Lower Control Limit
UCL = Upper Control Limit
RPD = Relative Percent Difference

ND = Not Detected
NA = Not Applicable

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG48847	Run Date:	11/4/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_9	SMPL Num:	10-505-01	SMPL DF:	1
Matrix:	Water	BLK FLNM:	9BK00073	SMPL FLNM:	9RU00078	MS DF:	1
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	9RU00079	MSD DF:	1
		LCS FLNM:	9QC00074	MSD FLNM:	9RU00080		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
1,2-dibromoethane	5.0	ND	ND	21.1	NA	20.0	ND	21.6	20.7	20.0	105.5	NA	75.0	121.0	108.0	103.5	60.0	140.0	4.3	20.0
chlorobenzene	5.0	ND	ND	21.2	NA	20.0	ND	20.9	20.9	20.0	106.0	NA	83.0	120.0	104.5	104.5	37.0	160.0	0.0	20.0
,1,1,2-tetrachloroethane	5.0	ND	ND	21.7	NA	20.0	ND	21.3	21.3	20.0	108.5	NA	79.0	118.0	106.5	106.5	60.0	140.0	0.0	20.0
ethylbenzene	5.0	ND	ND	21.5	NA	20.0	ND	21.2	20.9	20.0	107.5	NA	82.0	119.0	106.0	104.5	37.0	162.0	1.4	20.0
m+p-xylene	5.0	ND	ND	43.0	NA	40.0	ND	42.0	42.2	40.0	107.5	NA	81.0	121.0	105.0	105.5	60.0	140.0	0.5	20.0
o-xylene	5.0	ND	ND	21.5	NA	20.0	ND	21.1	20.9	20.0	107.5	NA	81.0	199.0	105.5	104.5	60.0	140.0	1.0	20.0
styrene	5.0	ND	ND	21.8	NA	20.0	ND	21.2	21.2	20.0	109.0	NA	81.0	118.0	106.0	106.0	60.0	140.0	0.0	20.0
bromoform	5.0	ND	ND	16.3	NA	20.0	ND	16.1	15.3	20.0	81.5	NA	68.0	129.0	80.5	76.5	45.0	169.0	5.1	20.0
isopropylbenzene	5.0	ND	ND	21.5	NA	20.0	ND	21.1	20.8	20.0	107.5	NA	81.0	121.0	105.5	104.0	60.0	140.0	1.4	20.0
,1,2,2-tetrachloroethane	5.0	ND	ND	20.8	NA	20.0	ND	21.8	20.7	20.0	104.0	NA	61.0	137.0	109.0	103.5	46.0	157.0	5.2	20.0
1,2,3-trichloropropane	5.0	ND	ND	21.0	NA	20.0	ND	22.0	21.0	20.0	105.0	NA	72.0	130.0	110.0	105.0	60.0	140.0	4.7	20.0
ans-1,4-dichloro-2-butene	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	20.0
propyl-benzene	5.0	ND	ND	21.3	NA	20.0	ND	21.9	22.0	20.0	106.5	NA	69.0	135.0	109.5	110.0	60.0	140.0	0.5	20.0
bromobenzene	5.0	ND	ND	21.2	NA	20.0	ND	21.1	21.1	20.0	106.0	NA	86.0	118.0	105.5	105.5	60.0	140.0	0.0	20.0
1,3,5-trimethylbenzene	5.0	ND	ND	21.3	NA	20.0	ND	21.9	21.9	20.0	106.5	NA	83.0	121.0	109.5	109.5	60.0	140.0	0.0	20.0
2-chlorotoluene	5.0	ND	ND	23.3	NA	20.0	ND	23.3	22.3	20.0	116.5	NA	80.0	126.0	116.5	111.5	60.0	140.0	4.4	20.0
4-chlorotoluene	5.0	ND	ND	19.6	NA	20.0	ND	19.8	20.9	20.0	98.0	NA	80.0	125.0	99.0	104.5	60.0	140.0	5.4	20.0
tert-butyl-benzene	5.0	ND	ND	21.7	NA	20.0	ND	22.1	22.1	20.0	108.5	NA	79.0	114.0	110.5	110.5	60.0	140.0	0.0	20.0
1,2,4-trimethylbenzene	5.0	ND	ND	21.3	NA	20.0	ND	21.6	21.7	20.0	106.5	NA	84.0	121.0	108.0	108.5	60.0	140.0	0.5	20.0
sec-butyl-benzene	5.0	ND	ND	20.8	NA	20.0	ND	20.8	20.8	20.0	104.0	NA	81.0	122.0	104.0	104.0	60.0	140.0	0.0	20.0

tes and Definitions:

L = Reporting Detection Limit
ND = Not Detected
(= Method Blank
NA = Not Applicable
(2 = Second Method Blank
S = Laboratory Control Sample
S2 = Second Laboratory Control Sample
MPL = Sample Results
S/MSD = Matrix Spike / Matrix Spike Duplicate
L = Lower Control Limit
L = Upper Control Limit

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG48847	Run Date:	11/4/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_9	SMPL Num:	10-505-01	SMPL DF:	1
Matrix:	Water	BLK FLNM:	98K00073	SMPL FLNM:	9RU00078	MS DF:	1
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	9RU00079	MSD DF:	1
		LCS FLNM:	9QC00074	MSD FLNM:	9RU00080		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
p-isopropyl-toluene	5.0	ND	ND	20.4	NA	20.0	ND	20.7	20.7	20.0	102.0	NA	80.0	119.0	103.5	103.5	60.0	140.0	0.0	20.0
1,3-dichlorobenzene	5.0	ND	ND	21.0	NA	20.0	ND	20.7	20.8	20.0	105.0	NA	85.0	119.0	103.5	104.0	60.0	140.0	0.5	20.0
1,4-dichlorobenzene	5.0	ND	ND	20.4	NA	20.0	ND	20.4	20.4	20.0	102.0	NA	82.0	122.0	102.0	102.0	18.0	190.0	0.0	20.0
n-butyl-benzene	5.0	ND	ND	21.0	NA	20.0	ND	21.2	21.3	20.0	105.0	NA	80.0	125.0	106.0	106.5	60.0	140.0	0.5	20.0
1,2-dichlorobenzene	5.0	ND	ND	21.1	NA	20.0	ND	20.8	20.7	20.0	105.5	NA	86.0	119.0	104.0	103.5	19.0	190.0	0.5	20.0
1,2-dibromo-3-chloropropane	5.0	ND	ND	17.1	NA	20.0	ND	18.3	17.0	20.0	85.5	NA	66.0	134.0	81.5	85.0	60.0	140.0	7.4	20.0
1,2,4-trichlorobenzene	5.0	ND	ND	20.5	NA	20.0	ND	20.4	20.6	20.0	102.5	NA	76.0	122.0	102.0	103.0	60.0	140.0	1.0	20.0
hexachlorobutadiene	5.0	ND	ND	20.3	NA	20.0	ND	20.4	20.0	20.0	101.5	NA	73.0	126.0	102.0	100.0	60.0	140.0	2.0	20.0
napthalene	10.0	ND	ND	19.4	NA	20.0	ND	23.1	21.9	20.0	97.0	NA	74.0	148.0	115.5	109.5	60.0	140.0	5.3	20.0
1,2,3-trichlorobenzene	5.0	ND	ND	20.2	NA	20.0	ND	20.6	20.2	20.0	101.0	NA	74.0	124.0	103.0	101.0	60.0	140.0	2.0	20.0

BLK2 = Second Method Blank
LCS = Laboratory Control Sample
LCS2 = Second Laboratory Control Sample
SMPL = Sample Results
MS/MSD = Matrix Spike / Matrix Spike Duplicate
LCL = Lower Control Limit
UCL = Upper Control Limit
RPD = Relative Percent Difference

ND = Not Detected
NA = Not Applicable
RDL = Reporting Detection Limit
BLK = Method Blank

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG48883	Run Date:	11/4/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_2	SMPL Num:	10-433-16	SMPL DF:	10
Matrix:	Water	BLK FLNM:	2BK27367	SMPL FLNM:	2BF27372	MS DF:	10
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	2BF27373.D	MSD DF:	10
		LCS FLNM:	2QC27368.D	MSD FLNM:	2BF27374.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
	RDL	BLK	BLK2	LCS	LCS2	LCS Spike Level	SMPL	MS	MSD	MS Spike Level	LCS	LCS2	LCS LCL	LCS UCL	MS	MSD	MS LCL	MS UCL	MS RPD	RPD UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
dichlorodifluoromethane	10.0	ND	ND	13.3	NA	20.0	ND	14.2	12.8	20.0	66.5	NA	38.0	148.0	71.2	64.1	60.0	140.0	10.5	20.0
chloromethane	10.0	ND	ND	14.5	NA	20.0	ND	15.3	13.9	20.0	72.7	NA	56.0	132.0	76.6	69.7	D	273.0	9.4	20.0
vinyl chloride	10.0	ND	ND	15.7	NA	20.0	ND	17.1	15.7	20.0	78.3	NA	68.0	126.0	85.6	78.6	D	251.0	6.5	20.0
bromomethane	10.0	ND	ND	21.9	NA	20.0	ND	21.1	20.8	20.0	109.4	NA	55.0	138.0	105.7	104.0	D	242.0	1.6	20.0
chloroethane	10.0	ND	ND	17.7	NA	20.0	ND	19.5	17.5	20.0	88.7	NA	70.0	128.0	97.6	87.3	14.0	230.0	11.1	20.0
trichlorofluoromethane	10.0	ND	ND	19.4	NA	20.0	ND	20.5	18.2	20.0	97.1	NA	70.0	127.0	102.3	91.0	17.0	181.0	11.6	20.0
freon 113	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	70.0	130.0	NA	20.0
acetone	100.0	ND	ND	12.7	NA	20.0	ND	15.9	12.7	20.0	63.7	NA	44.0	114.0	79.5	63.7	70.0	130.0	22.1	20.0
1,1-dichloroethene	5.0	ND	ND	18.9	NA	20.0	ND	20.1	18.2	20.0	94.5	NA	69.0	144.0	100.4	90.8	D	234.0	10.0	20.0
iodomethane	NTC	ND	ND	19.2	NA	20.0	ND	22.7	21.2	20.0	95.8	NA	NA	NA	113.5	105.8	70.0	130.0	7.0	20.0
methylene chloride	5.0	ND	ND	17.7	NA	20.0	20.5	84.6	53.9	20.0	88.3	NA	71.0	128.0	320.5	166.9	D	221.0	44.4	20.0
carbon disulfide	5.0	ND	ND	20.5	NA	20.0	ND	21.2	20.6	20.0	102.6	NA	67.0	136.0	106.1	103.1	70.0	130.0	2.9	20.0
acrylonitrile	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	70.0	130.0	NA	20.0
rans-1,2-dichloroethene	5.0	ND	ND	22.6	NA	20.0	ND	22.2	21.6	20.0	113.1	NA	85.0	133.0	111.0	108.2	54.0	156.0	2.6	20.0
vinyl acetate	10.0	ND	ND	18.5	NA	20.0	ND	17.4	18.3	20.0	92.4	NA	9.0	236.0	87.2	91.4	9.0	236.0	4.8	20.0
1,1-dichloroethane	5.0	ND	ND	21.7	NA	20.0	ND	20.6	21.3	20.0	108.4	NA	82.0	124.0	102.9	106.4	59.0	155.0	3.4	20.0
2-butanone	100.0	ND	ND	15.9	NA	20.0	ND	15.6	16.3	20.0	79.4	NA	43.0	140.0	77.8	81.7	70.0	130.0	4.9	20.0
2,2-dichloropropane	5.0	ND	ND	20.5	NA	20.0	ND	20.6	19.3	20.0	102.5	NA	77.0	126.0	103.0	96.3	60.0	140.0	6.7	20.0
cis-1,2-dichloroethene	5.0	ND	ND	20.4	NA	20.0	ND	20.3	19.7	20.0	102.0	NA	69.0	130.0	101.6	98.6	60.0	140.0	3.0	20.0
chloroform	5.0	ND	ND	20.7	NA	20.0	ND	20.8	20.3	20.0	103.6	NA	83.0	121.0	103.9	101.7	51.0	138.0	2.1	20.0

es and Definitions:

.= Reporting Detection Limit
;= Method Blank
:2= Second Method Blank
;= Laboratory Control Sample
;2= Second Laboratory Control Sample
PL= Sample Results
/MSD= Matrix Spike / Matrix Spike Duplicate
.= Lower Control Limit
L= Upper Control Limit
D= Relative Percent Dif ce

ND= Not Detected
NA= Not Applicable

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG48883	Run Date:	11/4/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_2	SMPL Num:	10-433-16	SMPL DF:	10
Matrix:	Water	BLK FLNM:	2BK27367	SMPL FLNM:	2BF27372	MS DF:	10
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	2BF27373.D	MSD DF:	10
		LCS FLNM:	2QC27368.D	MSD FLNM:	2BF27374.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
	RDL	BLK	BLK2	LCS	LCS2	LCS Spike Level	SMPL	MS	MSD	MS Spike Level	LCS	LCS2	LCS LCL	LCS UCL	MS	MSD	MS LCL	MS UCL	MS RPD	RPD UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
bromochloromethane	5.0	ND	ND	21.0	NA	20.0	ND	22.7	20.9	20.0	105.1	NA	85.0	118.0	113.6	104.4	60.0	140.0	8.4	20.0
1,1,1-trichloroethane	5.0	ND	ND	20.9	NA	20.0	ND	20.4	20.0	20.0	104.5	NA	74.0	125.0	102.0	100.0	52.0	162.0	2.0	20.0
1,1-dichloropropene	5.0	ND	ND	23.0	NA	20.0	ND	22.3	22.1	20.0	114.9	NA	85.0	126.0	111.4	110.6	60.0	140.0	0.7	20.0
carbon tetrachloride	5.0	ND	ND	20.9	NA	20.0	ND	21.6	19.9	20.0	104.5	NA	73.0	129.0	108.2	99.3	70.0	140.0	8.6	20.0
1,2-dichloroethane	5.0	ND	ND	20.9	NA	20.0	ND	20.8	21.0	20.0	104.4	NA	76.0	123.0	104.2	104.9	49.0	155.0	0.7	20.0
benzene	5.0	ND	ND	21.0	NA	20.0	ND	20.7	20.5	20.0	104.8	NA	86.0	119.0	103.5	102.3	37.0	151.0	1.2	20.0
trichloroethene	5.0	ND	ND	21.0	NA	20.0	ND	21.9	20.1	20.0	105.1	NA	82.0	120.0	109.7	100.3	71.0	157.0	9.0	20.0
1,2-dichloropropane	5.0	ND	ND	21.5	NA	20.0	ND	20.2	21.4	20.0	107.4	NA	74.0	126.0	100.9	107.2	0	210.0	6.1	20.0
bromodichloromethane	5.0	ND	ND	20.8	NA	20.0	ND	22.7	20.3	20.0	104.0	NA	74.0	126.0	113.3	101.6	35.0	155.0	10.8	20.0
dibromomethane	5.0	ND	ND	21.5	NA	20.0	ND	22.3	21.1	20.0	107.5	NA	78.0	126.0	111.7	105.5	60.0	140.0	5.8	20.0
2-chloroethylvinyl-ether	10.0	ND	ND	20.5	NA	20.0	ND	23.1	20.8	20.0	102.5	NA	68.0	144.0	115.3	104.0	70.0	130.0	10.3	20.0
4-methyl-2-pentanone	10.0	ND	ND	20.0	NA	20.0	16.3	39.2	36.2	20.0	99.9	NA	70.0	127.0	114.6	99.6	70.0	130.0	8.0	20.0
cis-1,3-dichloropropene	5.0	ND	ND	21.1	NA	20.0	ND	23.9	21.2	20.0	105.3	NA	77.0	123.0	119.3	105.8	D	227.0	12.0	20.0
toluene	5.0	ND	ND	21.0	NA	20.0	28.7	48.6	49.2	20.0	105.2	NA	83.0	119.0	99.7	102.7	47.0	150.0	1.2	20.0
trans-1,3-dichloropropene	5.0	ND	ND	21.4	NA	20.0	ND	20.6	20.9	20.0	107.2	NA	74.0	124.0	103.2	104.4	17.0	183.0	1.2	20.0
1,1,2-trichloroethane	5.0	ND	ND	20.7	NA	20.0	ND	20.9	20.7	20.0	103.4	NA	72.0	119.0	104.7	103.7	52.0	150.0	1.0	20.0
2-hexanone	10.0	ND	ND	19.9	NA	20.0	ND	21.2	22.3	20.0	99.5	NA	55.0	114.0	105.9	111.3	70.0	130.0	5.0	20.0
1,3-dichloropropane	5.0	ND	ND	21.0	NA	20.0	ND	21.4	21.2	20.0	104.8	NA	73.0	122.0	107.0	105.8	60.0	140.0	1.2	20.0
tetrachloroethene	5.0	ND	ND	21.5	NA	20.0	ND	20.0	20.2	20.0	107.6	NA	82.0	120.0	100.2	101.2	64.0	148.0	0.9	20.0
dibromochloromethane	5.0	ND	ND	20.5	NA	20.0	ND	20.3	20.0	20.0	102.4	NA	72.0	121.0	101.6	99.8	53.0	149.0	1.8	20.0

lotes and Definitions:

DL = Reporting Detection Limit
LK = Method Blank
LK2 = Second Method Blank
CS = Laboratory Control Sample
CS2 = Second Laboratory Control Sample
MPL = Sample Results
IS/MSD = Matrix Spike / Matrix Spike Duplicate
CL = Lower Control Limit
ICL = Upper Control Limit
PD = Relative Percent Difference

ND = Not Detected
NA = Not Applicable

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG48883	Run Date:	11/4/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_2	SMPL Num:	10-433-16	SMPL DF:	10
Matrix:	Water	BLK FLNM:	2BK27367	SMPL FLNM:	2BF27372	MS DF:	10
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	2BF27373.D	MSD DF:	10
		LCS FLNM:	2QC27368.D	MSD FLNM:	2BF27374.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
1,2-dibromoethane	5.0	ND	ND	20.8	NA	20.0	ND	21.3	20.5	20.0	104.2	NA	75.0	121.0	106.7	102.5	60.0	140.0	4.0	20.0
chlorobenzene	5.0	ND	ND	20.9	NA	20.0	ND	20.5	20.6	20.0	104.4	NA	83.0	120.0	102.4	103.1	37.0	160.0	0.7	20.0
1,1,1,2-tetrachloroethane	5.0	ND	ND	20.8	NA	20.0	ND	20.2	20.3	20.0	103.8	NA	79.0	118.0	101.1	101.4	60.0	140.0	0.3	20.0
ethylbenzene	5.0	ND	ND	21.1	NA	20.0	ND	20.8	21.1	20.0	105.5	NA	82.0	119.0	104.0	105.4	37.0	162.0	1.3	20.0
m+p-xylene	5.0	ND	ND	41.3	NA	40.0	ND	41.0	41.3	40.0	103.4	NA	81.0	121.0	102.6	103.2	60.0	140.0	0.6	20.0
o-xylene	5.0	ND	ND	20.4	NA	20.0	ND	20.6	20.7	20.0	102.0	NA	81.0	199.0	102.8	103.5	60.0	140.0	0.7	20.0
styrene	5.0	ND	ND	20.6	NA	20.0	ND	20.9	21.0	20.0	102.9	NA	81.0	118.0	104.5	105.0	60.0	140.0	0.5	20.0
bromoform	5.0	ND	ND	19.6	NA	20.0	ND	19.5	19.3	20.0	98.1	NA	68.0	129.0	97.5	96.4	45.0	169.0	1.1	20.0
isopropylbenzene	5.0	ND	ND	20.7	NA	20.0	ND	22.1	22.2	20.0	103.7	NA	81.0	121.0	110.3	111.2	60.0	140.0	0.8	20.0
1,1,2,2-tetrachloroethane	5.0	ND	ND	20.5	NA	20.0	ND	21.3	21.2	20.0	102.7	NA	61.0	137.0	106.7	105.9	46.0	157.0	0.7	20.0
1,2,3-trichloropropane	5.0	ND	ND	20.8	NA	20.0	ND	21.0	21.0	20.0	104.2	NA	72.0	130.0	105.0	105.2	60.0	140.0	0.2	20.0
ans-1,4-dichloro-2-butene	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	20.0
propyl-benzene	5.0	ND	ND	21.2	NA	20.0	ND	20.2	20.7	20.0	105.8	NA	89.0	135.0	100.9	103.3	60.0	140.0	2.3	20.0
bromobenzene	5.0	ND	ND	21.4	NA	20.0	ND	20.6	20.9	20.0	107.1	NA	86.0	116.0	102.9	104.6	60.0	140.0	1.7	20.0
1,3,5-trimethylbenzene	5.0	ND	ND	21.0	NA	20.0	ND	20.3	20.8	20.0	105.2	NA	83.0	121.0	101.5	104.0	60.0	140.0	2.4	20.0
2-chlorotoluene	5.0	ND	ND	21.2	NA	20.0	ND	20.4	20.6	20.0	106.2	NA	80.0	126.0	101.8	103.2	60.0	140.0	1.3	20.0
4-chlorotoluene	5.0	ND	ND	19.9	NA	20.0	ND	21.0	21.7	20.0	99.4	NA	80.0	125.0	104.8	108.3	60.0	140.0	3.3	20.0
tert-butyl-benzene	5.0	ND	ND	21.8	NA	20.0	ND	20.2	20.7	20.0	109.2	NA	79.0	114.0	101.1	103.6	60.0	140.0	2.5	20.0
1,2,4-trimethylbenzene	5.0	ND	ND	21.3	NA	20.0	ND	21.0	21.3	20.0	106.6	NA	64.0	121.0	105.0	106.8	60.0	140.0	1.5	20.0
sec-butyl-benzene	5.0	ND	ND	22.5	NA	20.0	ND	20.3	20.9	20.0	112.3	NA	81.0	122.0	101.4	104.4	60.0	140.0	3.0	20.0

tes and Definitions:

L = Reporting Detection Limit
K = Method Blank
K2 = Second Method Blank
S = Laboratory Control Sample
S2 = Second Laboratory Control Sample
MPL = Sample Results
S/MSD = Matrix Spike / Matrix Spike Duplicate
L = Lower Control Limit
L = Upper Control Limit

ND = Not Detected
NA = Not Applicable

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG48883	Run Date:	11/4/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_2	SMPL Num:	10-433-16	SMPL DF:	10
Matrix:	Water	BLK FLNM:	2BK27367	SMPL FLNM:	2BF27372	MS DF:	10
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	2BF27373.D	MSD DF:	10
		LCS FLNM:	2QC27368.D	MSD FLNM:	2BF27374.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
p-isopropyl-toluene	5.0	ND	ND	21.6	NA	20.0	ND	19.8	20.1	20.0	108.2	NA	80.0	119.0	99.0	100.5	60.0	140.0	1.6	20.0
1,3-dichlorobenzene	5.0	ND	ND	21.7	NA	20.0	ND	20.0	20.6	20.0	108.6	NA	85.0	119.0	100.1	103.2	60.0	140.0	3.0	20.0
1,4-dichlorobenzene	5.0	ND	ND	21.1	NA	20.0	ND	20.5	21.0	20.0	105.7	NA	82.0	122.0	102.5	105.1	18.0	190.0	2.5	20.0
n-butyl-benzene	5.0	ND	ND	22.7	NA	20.0	ND	20.2	20.9	20.0	113.3	NA	80.0	125.0	101.2	104.7	60.0	140.0	3.4	20.0
1,2-dichlorobenzene	5.0	ND	ND	21.7	NA	20.0	ND	20.5	21.3	20.0	108.5	NA	86.0	119.0	102.4	106.3	19.0	190.0	3.7	20.0
1,2-dibromo-3-chloropropane	5.0	ND	ND	22.5	NA	20.0	ND	20.5	20.4	20.0	112.7	NA	66.0	134.0	102.5	101.9	60.0	140.0	0.6	20.0
1,2,4-trichlorobenzene	5.0	ND	ND	21.9	NA	20.0	ND	19.9	20.1	20.0	109.6	NA	78.0	122.0	99.5	100.4	60.0	140.0	0.9	20.0
hexachlorobutadiene	5.0	ND	ND	19.5	NA	20.0	ND	16.8	17.4	20.0	97.6	NA	73.0	125.0	84.1	87.2	60.0	140.0	3.6	20.0
napthalene	10.0	ND	ND	21.3	NA	20.0	ND	21.0	20.7	20.0	106.3	NA	74.0	148.0	105.2	103.3	60.0	140.0	1.8	20.0
1,2,3-trichlorobenzene	5.0	ND	ND	21.5	NA	20.0	ND	19.8	20.1	20.0	107.5	NA	74.0	124.0	99.2	100.7	60.0	140.0	1.6	20.0

LK2 = Second Method Blank
CS = Laboratory Control Sample
CS2 = Second Laboratory Control Sample
MPL = Sample Results
IS/MSD = Matrix Spike / Matrix Spike Duplicate
CL = Lower Control Limit
CL = Upper Control Limit
PD = Relative Percent Difference

ND = Not Detected
NA = Not Applicable
RDL = Reporting Detection Limit
BLK = Method Blank

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG48919	Run Date:	11/4/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_9	SMPL Num:	10-552-07	SMPL DF:	10
Matrix:	Water	BLK FLNM:	9BK00095	SMPL FLNM:	9BR00099	MS DF:	10
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	9BR00100	MSD DF:	10
		LCS FLNM:	9QC00096	MSD FLNM:	9BR00101		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
dichlorodifluoromethane	10.0	ND	ND	11.2	NA	20.0	ND	8.9	11.0	20.0	56.2	NA	38.0	148.0	44.6	54.8	60.0	140.0	20.6	20.0
chloromethane	10.0	ND	ND	15.9	NA	20.0	ND	14.5	16.8	20.0	79.4	NA	56.0	132.0	72.7	84.2	D	273.0	14.7	20.0
vinyl chloride	10.0	ND	ND	19.2	NA	20.0	ND	16.7	19.3	20.0	96.0	NA	68.0	125.0	83.4	96.3	D	251.0	14.4	20.0
bromomethane	10.0	ND	ND	18.2	NA	20.0	ND	16.6	18.9	20.0	90.8	NA	55.0	138.0	83.1	94.4	D	242.0	12.7	20.0
chloroethane	10.0	ND	ND	17.5	NA	20.0	ND	15.8	17.4	20.0	87.7	NA	70.0	128.0	79.0	97.2	14.0	230.0	9.8	20.0
trichlorofluoromethane	10.0	ND	ND	17.9	NA	20.0	ND	14.5	16.3	20.0	89.4	NA	70.0	127.0	72.4	81.3	17.0	181.0	11.5	20.0
freon 113	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	70.0	130.0	NA	20.0
acetone	100.0	ND	ND	16.9	NA	20.0	ND	17.7	17.8	20.0	84.7	NA	44.0	114.0	88.7	89.1	70.0	130.0	0.5	20.0
1,1-dichloroethene	5.0	ND	ND	19.0	NA	20.0	ND	15.8	17.9	20.0	95.0	NA	69.0	144.0	79.0	89.5	D	234.0	12.5	20.0
iodomethane	NTC	ND	ND	14.5	NA	20.0	ND	12.9	15.2	20.0	72.7	NA	NA	NA	64.5	75.9	70.0	130.0	16.2	20.0
methylene chloride	5.0	ND	ND	20.3	NA	20.0	ND	19.8	20.8	20.0	101.6	NA	71.0	128.0	99.1	103.8	D	221.0	4.6	20.0
carbon disulfide	5.0	ND	ND	19.0	NA	20.0	ND	16.6	17.8	20.0	95.2	NA	67.0	136.0	83.1	89.0	70.0	130.0	6.9	20.0
acrylonitrile	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	70.0	130.0	NA	20.0
rans-1,2-dichloroethene	5.0	ND	ND	20.8	NA	20.0	ND	18.5	20.3	20.0	103.9	NA	85.0	133.0	92.4	101.3	54.0	156.0	9.2	20.0
vinyl acetate	10.0	ND	ND	9.7	NA	20.0	ND	16.7	17.1	20.0	48.6	NA	9.0	236.0	83.4	85.5	9.0	236.0	2.4	20.0
1,1-dichloroethane	5.0	ND	ND	19.9	NA	20.0	ND	18.3	20.1	20.0	99.4	NA	82.0	124.0	91.7	100.4	59.0	155.0	9.1	20.0
2-butanone	100.0	ND	ND	18.3	NA	20.0	ND	16.0	16.3	20.0	91.5	NA	43.0	140.0	80.0	81.6	70.0	130.0	2.0	20.0
2,2-dichloropropane	5.0	ND	ND	17.0	NA	20.0	ND	13.3	15.1	20.0	85.0	NA	77.0	126.0	66.7	75.5	60.0	140.0	12.5	20.0
cis-1,2-dichloroethene	5.0	ND	ND	19.2	NA	20.0	ND	18.0	19.1	20.0	96.1	NA	69.0	130.0	89.8	95.5	60.0	140.0	6.1	20.0
chloroform	5.0	ND	ND	20.1	NA	20.0	ND	18.8	20.4	20.0	100.5	NA	83.0	121.0	94.0	102.1	51.0	138.0	8.2	20.0

es and Definitions:

. = Reporting Detection Limit
; = Method Blank
:2 = Second Method Blank
; = Laboratory Control Sample
S2 = Second Laboratory Control Sample
PL = Sample Results
/MSD = Matrix Spike / Matrix Spike Duplicate
. = Lower Control Limit
L = Upper Control Limit
) = Relative Percent Dif ce

ND = Not Detected
NA = Not Applicable

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG48919	Run Date:	11/4/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_9	SMPL Num:	10-552-07	SMPL DF:	10
Matrix:	Water	BLK FLNM:	9BK00095	SMPL FLNM:	9BR00099	MS DF:	10
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	9BR00100	MSD DF:	10
		LCS FLNM:	9QC00096	MSD FLNM:	9BR00101		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
	RDL	BLK	BLK2	LCS	LCS2	LCS Spike Level	SMPL	MS	MSD	MS Spike Level	LCS	LCS2	LCS LCL	LCS UCL	MS	MSD	MS LCL	MS UCL	MS RPD	RPD UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
bromochloromethane	5.0	ND	ND	20.5	NA	20.0	ND	20.6	20.8	20.0	102.3	NA	85.0	118.0	103.0	104.0	60.0	140.0	1.0	20.0
1,1,1-trichloroethane	5.0	ND	ND	19.1	NA	20.0	ND	16.8	18.5	20.0	95.5	NA	74.0	125.0	83.0	92.5	52.0	162.0	10.8	20.0
1,1-dichloropropene	5.0	ND	ND	20.6	NA	20.0	ND	17.6	19.7	20.0	103.1	NA	85.0	126.0	88.1	98.6	60.0	140.0	11.3	20.0
carbon tetrachloride	5.0	ND	ND	20.0	NA	20.0	ND	16.5	18.6	20.0	100.1	NA	73.0	129.0	82.4	93.1	70.0	140.0	12.1	20.0
1,2-dichloroethane	5.0	ND	ND	20.5	NA	20.0	ND	19.7	20.1	20.0	102.7	NA	76.0	123.0	98.5	100.5	49.0	155.0	2.0	20.0
benzene	5.0	ND	ND	19.4	NA	20.0	ND	17.7	19.3	20.0	97.1	NA	86.0	119.0	88.6	96.3	37.0	151.0	8.3	20.0
trichloroethene	5.0	ND	ND	21.2	NA	20.0	ND	16.9	19.1	20.0	106.0	NA	82.0	120.0	84.6	95.4	71.0	157.0	11.9	20.0
1,2-dichloropropane	5.0	ND	ND	19.9	NA	20.0	ND	19.0	20.2	20.0	99.5	NA	74.0	126.0	95.2	100.8	0	210.0	5.7	20.0
bromodichloromethane	5.0	ND	ND	21.0	NA	20.0	ND	20.0	21.2	20.0	105.2	NA	74.0	126.0	99.9	106.2	35.0	155.0	6.2	20.0
dibromomethane	5.0	ND	ND	20.7	NA	20.0	ND	19.9	20.1	20.0	103.5	NA	78.0	125.0	99.6	100.7	60.0	140.0	1.1	20.0
2-chloroethylvinyl-ether	10.0	ND	ND	18.6	NA	20.0	ND	15.5	15.3	20.0	93.2	NA	68.0	144.0	77.3	76.7	70.0	130.0	0.8	20.0
4-methyl-2-pentanone	10.0	ND	ND	18.3	NA	20.0	ND	20.1	19.9	20.0	91.3	NA	70.0	127.0	100.4	99.7	70.0	130.0	0.7	20.0
cis-1,3-dichloropropene	5.0	ND	ND	20.2	NA	20.0	ND	19.2	20.1	20.0	101.1	NA	77.0	123.0	96.1	100.5	0	227.0	4.5	20.0
toluene	5.0	ND	ND	19.3	NA	20.0	ND	17.8	19.0	20.0	96.6	NA	83.0	119.0	87.8	95.0	47.0	150.0	7.9	20.0
trans-1,3-dichloropropene	5.0	ND	ND	19.2	NA	20.0	ND	18.2	18.7	20.0	95.9	NA	74.0	124.0	90.9	93.7	17.0	183.0	3.1	20.0
1,1,2-trichloroethane	5.0	ND	ND	19.6	NA	20.0	ND	18.3	18.7	20.0	98.1	NA	72.0	119.0	91.4	93.5	52.0	150.0	2.3	20.0
2-hexanone	10.0	ND	ND	17.3	NA	20.0	ND	23.5	23.0	20.0	88.8	NA	55.0	114.0	117.3	114.8	70.0	130.0	2.2	20.0
1,3-dichloropropane	5.0	ND	ND	19.4	NA	20.0	ND	18.4	18.6	20.0	96.8	NA	73.0	122.0	92.1	93.1	60.0	140.0	1.1	20.0
tetrachloroethene	5.0	ND	ND	18.6	NA	20.0	ND	15.8	17.9	20.0	93.2	NA	82.0	120.0	79.0	89.4	64.0	148.0	12.4	20.0
dibromochloromethane	5.0	ND	ND	19.8	NA	20.0	ND	18.8	19.9	20.0	99.2	NA	72.0	121.0	94.2	99.6	53.0	149.0	5.5	20.0

Notes and Definitions:

RDL = Reporting Detection Limit
BLK = Method Blank
BLK2 = Second Method Blank
LCS = Laboratory Control Sample
LCS2 = Second Laboratory Control Sample
SMPL = Sample Results
MS/MSD = Matrix Spike / Matrix Spike Duplicate
LCL = Lower Control Limit
UCL = Upper Control Limit
RPD = Relative Percent Difference

ND = Not Detected
NA = Not Applicable

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG48919	Run Date:	11/4/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_9	SMPL Num:	10-552-07	SMPL DF:	10
Matrix:	Water	BLK FLNM:	98K00095	SMPL FLNM:	98R00099	MS DF:	10
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	98R00100	MSD DF:	10
		LCS FLNM:	9QC00098	MSD FLNM:	98R00101		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
1,2-dibromoethane	5.0	ND	ND	19.7	NA	20.0	ND	18.7	19.0	20.0	98.5	NA	75.0	121.0	93.5	95.1	60.0	140.0	1.6	20.0
chlorobenzene	5.0	ND	ND	19.9	NA	20.0	ND	18.4	19.8	20.0	99.6	NA	83.0	120.0	92.1	98.9	37.0	160.0	7.1	20.0
,1,1,2-tetrachloroethane	5.0	ND	ND	19.7	NA	20.0	ND	19.0	20.1	20.0	98.6	NA	79.0	118.0	95.1	100.5	60.0	140.0	5.6	20.0
ethylbenzene	5.0	ND	ND	19.1	NA	20.0	ND	17.6	19.0	20.0	95.5	NA	82.0	119.0	87.8	94.8	37.0	162.0	7.6	20.0
m+p-xylene	5.0	ND	ND	38.0	NA	40.0	ND	34.6	37.6	40.0	95.0	NA	81.0	121.0	86.5	93.9	60.0	140.0	8.2	20.0
o-xylene	5.0	ND	ND	19.5	NA	20.0	ND	18.0	19.5	20.0	97.7	NA	81.0	199.0	89.9	97.6	60.0	140.0	8.2	20.0
styrene	5.0	ND	ND	20.0	NA	20.0	ND	18.6	20.1	20.0	100.0	NA	81.0	118.0	93.2	100.4	60.0	140.0	7.5	20.0
bromoform	5.0	ND	ND	15.3	NA	20.0	ND	14.4	14.4	20.0	76.3	NA	68.0	129.0	72.1	71.8	45.0	169.0	0.5	20.0
isopropylbenzene	5.0	ND	ND	19.1	NA	20.0	ND	16.6	18.5	20.0	95.6	NA	81.0	121.0	83.1	92.3	60.0	140.0	10.5	20.0
,1,2,2-tetrachloroethane	5.0	ND	ND	17.4	NA	20.0	ND	18.9	18.4	20.0	86.9	NA	61.0	137.0	94.4	92.1	46.0	157.0	2.5	20.0
1,2,3-trichloropropane	5.0	ND	ND	19.3	NA	20.0	ND	18.9	18.4	20.0	96.3	NA	72.0	130.0	94.5	92.0	60.0	140.0	2.7	20.0
ans-1,4-dichloro-2-butene	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	20.0
propyl-benzene	5.0	ND	ND	18.6	NA	20.0	ND	16.5	18.4	20.0	92.8	NA	69.0	135.0	82.5	91.9	60.0	140.0	10.8	20.0
bromobenzene	5.0	ND	ND	19.4	NA	20.0	ND	18.8	19.7	20.0	96.8	NA	86.0	118.0	93.9	98.3	60.0	140.0	4.6	20.0
1,3,5-trimethylbenzene	5.0	ND	ND	18.8	NA	20.0	ND	17.2	18.9	20.0	93.9	NA	83.0	121.0	86.1	94.4	60.0	140.0	9.2	20.0
2-chlorotoluene	5.0	ND	ND	17.7	NA	20.0	ND	17.6	21.2	20.0	88.3	NA	80.0	126.0	88.1	106.0	60.0	140.0	18.6	20.0
4-chlorotoluene	5.0	ND	ND	20.0	NA	20.0	ND	17.9	17.4	20.0	99.8	NA	80.0	125.0	89.7	87.1	60.0	140.0	2.9	20.0
tert-butyl-benzene	5.0	ND	ND	19.0	NA	20.0	ND	17.1	18.8	20.0	94.8	NA	79.0	114.0	85.4	94.0	60.0	140.0	9.5	20.0
1,2,4-trimethylbenzene	5.0	ND	ND	18.9	NA	20.0	ND	17.8	19.4	20.0	94.3	NA	84.0	121.0	86.8	97.2	60.0	140.0	9.1	20.0
sec-butyl-benzene	5.0	ND	ND	18.0	NA	20.0	ND	15.8	17.7	20.0	89.9	NA	81.0	122.0	78.9	88.4	60.0	140.0	11.4	20.0

tes and Definitions:

L = Reporting Detection Limit
ND = Not Detected
K = Method Blank
NA = Not Applicable
K2 = Second Method Blank
S = Laboratory Control Sample
S2 = Second Laboratory Control Sample
MPL = Sample Results
S/MSD = Matrix Spike / Matrix Spike Duplicate
CL = Lower Control Limit
CL = Upper Control Limit
PD = Relative Percent Di[illegible]ce

KEMRON [illegible]VIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG48919	Run Date:	11/4/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_9	SMPL Num:	10-552-07	SMPL DF:	10
Matrix:	Water	BLK FLNM:	9BK00095	SMPL FLNM:	9BR00099	MS DF:	10
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	9BR00100	MSD DF:	10
		LCS FLNM:	9QC00096	MSD FLNM:	9BR00101		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
				LCS Spike						MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
p-isopropyl-toluene	5.0	ND	ND	17.9	NA	20.0	ND	16.0	17.6	20.0	89.5	NA	80.0	119.0	79.8	88.2	60.0	140.0	10.0	20.0
1,3-dichlorobenzene	5.0	ND	ND	19.2	NA	20.0	ND	18.4	19.8	20.0	96.1	NA	85.0	119.0	92.0	99.1	60.0	140.0	7.4	20.0
1,4-dichlorobenzene	5.0	ND	ND	18.9	NA	20.0	ND	18.3	19.4	20.0	94.3	NA	82.0	122.0	91.5	97.1	18.0	190.0	5.9	20.0
n-butyl-benzene	5.0	ND	ND	18.4	NA	20.0	ND	15.9	18.0	20.0	92.1	NA	80.0	125.0	79.3	89.9	60.0	140.0	12.5	20.0
1,2-dichlorobenzene	5.0	ND	ND	19.7	NA	20.0	ND	19.1	19.7	20.0	98.3	NA	86.0	119.0	95.7	98.7	19.0	190.0	3.1	20.0
1,2-dibromo-3-chloropropane	5.0	ND	ND	15.8	NA	20.0	ND	15.0	15.0	20.0	79.1	NA	66.0	134.0	74.9	74.8	60.0	140.0	0.2	20.0
1,2,4-trichlorobenzene	5.0	ND	ND	19.0	NA	20.0	ND	18.3	19.1	20.0	95.1	NA	78.0	122.0	91.4	95.4	60.0	140.0	4.3	20.0
hexachlorobutadiene	5.0	ND	ND	17.7	NA	20.0	ND	15.0	17.0	20.0	88.7	NA	73.0	125.0	75.1	85.0	60.0	140.0	12.4	20.0
napthalene	10.0	ND	ND	19.1	NA	20.0	ND	18.1	18.9	20.0	95.3	NA	74.0	148.0	90.3	94.6	60.0	140.0	4.7	20.0
1,2,3-trichlorobenzene	5.0	ND	ND	18.9	NA	20.0	ND	18.2	18.8	20.0	94.5	NA	74.0	124.0	90.8	94.1	60.0	140.0	3.6	20.0

BLK2 = Second Method Blank
LCS = Laboratory Control Sample
LCS2 = Second Laboratory Control Sample
SMPL = Sample Results
MS/MSD = Matrix Spike / Matrix Spike Duplicate
LCL = Lower Control Limit
UCL = Upper Control Limit
RPD = Relative Percent Difference

ND = Not Detected
NA = Not Applicable
RDL = Reporting Detection Limit
BLK = Method Blank

KEMRON ENVIRONMENTAL SERVICES

MARIETTA, OH

QUALITY CONTROL SUMMARY / 8081 WATERS , REAR

INSTRUMENT : HP9

EXT'N DATE : 11/3/98 ANALYST : ECL BLK FLNM : 1249 SAMPLE ID : NA

EXT'N BENCH SHT : V104P41 RUN DATE : 11/5/98 LCS FLNM : 1250 SMPL FLNM : NA

EXT'N WORK GRP : WG48766 ANAL WORK GRP : WG48855 MS FLNM : NA

MSD FLNM : NA

COMPOUND	RDL	CONCENTRATION , ug/L					% RECOVERY								PERCENT		
		Blank	LCS	Sample	MS	MSD	Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	MS/MSD RPD	RPD Advisory Limists
ALPHA-BHC	0.05	ND	0.357	ND	NA	NA	NA	71.4	37	134	NA	#######	#######	51	145	NA	0-43
GAMMA-BHC	0.05	ND	0.409	ND	NA	NA	NA	81.8	32	127	NA	#######	#######	54	134	NA	0-18
BETA-BHC	0.05	ND	0.467	ND	NA	NA	NA	93.4	17	147	NA	#######	#######	51	129	NA	0-28
HEPTACHLOR	0.05	ND	0.334	ND	NA	NA	NA	66.8	34	111	NA	#######	#######	40	139	NA	0-37
DELTA-BHC	0.05	ND	0.565	ND	NA	NA	NA	113.0	19	140	NA	#######	#######	56	138	NA	0-78
ALDRIN	0.05	ND	0.330	ND	NA	NA	NA	66.0	42	122	NA	#######	#######	26	143	NA	0-36
HEPTACHLOR EPOXIDE	0.05	ND	0.453	ND	NA	NA	NA	90.6	37	142	NA	#######	#######	51	135	NA	0-40
GAMMA-CHLORDANE	0.05	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40
ALPHA-CHLORDANE	0.05	ND	NA	ND	NA	NA	NA	NA	54	119	NA	NA	NA	45	115	NA	0-17
ENDOSULFAN 1	0.05	ND	0.382	ND	NA	NA	NA	76.4	45	153	NA	#######	#######	37	123	NA	0-22
4,4-DDE	0.10	ND	0.536	ND	NA	NA	NA	107.2	30	145	NA	#######	#######	64	152	NA	0-23
DIELDRIN	0.10	ND	0.531	ND	NA	NA	NA	106.2	36	146	NA	#######	#######	23	171	NA	0-20
ENDRIN	0.10	ND	0.483	ND	NA	NA	NA	96.6	30	147	NA	#######	#######	56	154	NA	0-28
4,4-DDD	0.10	ND	0.539	ND	NA	NA	NA	107.8	31	141	NA	#######	#######	58	179	NA	0-30
ENDOSULFAN II	0.10	ND	0.485	ND	NA	NA	NA	97.0	D	202	NA	#######	#######	21	117	NA	0-18
4,4-DDT	0.10	ND	0.580	ND	NA	NA	NA	116.0	25	150	NA	#######	#######	42	168	NA	0-22
ENDRIN ALDEHYDE	0.10	ND	0.381	ND	NA	NA	NA	76.2	NA	NA	NA	#######	#######	21	115	NA	0-40
ENDOSULFAN SULFATE	0.10	ND	0.468	ND	NA	NA	NA	93.6	26	144	NA	#######	#######	31	117	NA	0-30
METHOXYCHLOR	0.10	ND	0.567	ND	NA	NA	NA	113	NA	NA	NA	#######	#######	26	196	NA	0-19
ENDRIN KETONE	0.50	ND	0.558	ND	NA	NA	NA	112	NA	NA	NA	#######	#######	NA	NA	NA	
Tech-CHLORDANE	1.0	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40
TOXAPHENE	1.0	ND	NA	ND	NA	NA	NA	NA	41	126	NA	NA	NA	40	125	NA	0-40
SURROGATES																	
2,4,5,6-TETRACHLORO-M-XYLENE		11.5	9.98	0.00	0.00	0.00	57.5	49.9	13	154	0.0	0.0	0.0	13	154		
DECACHLOROBIPHENYL		17.7	18.8	0.0	0.0	0.0	88.4	94.2	25	140	0.0	0.0	0.0	25	140		

COMPOUND	Blank	LCS	Sample	MS	MSD
ALPHA-BHC				#	#
GAMMA-BHC				#	#
BETA-BHC				#	#
HEPTACHLOR				#	#
DELTA-BHC				#	#
ALDRIN				#	#
HEPTACHLOR EPOXIDE				#	#
GAMMA-CHLORDANE				#	#
ALPHA-CHLORDANE					
ENDOSULFAN 1				#	#
4,4-DDE				#	#
DIELDRIN				#	#
ENDRIN				#	#
4,4-DDD				#	#
ENDOSULFAN II				#	#
4,4-DDT				#	#
ENDRIN ALDEHYDE				#	#
ENDOSULFAN SULFATE				#	#
METHOXYCHLOR				#	#
ENDRIN KETONE					
Tech-CHLORDANE					
TOXAPHENE					
SURROGATES					
2,4,5,6-TETRACHLORO-M-XYLENE		L	L	L	
DECACHLOROBIPHENYL		L	L	L	

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 2.5 ug/kg

SURROGATES spiked at 20 ug/kg

NA = NOT APPLICABLE

DL = DILUTED OUT

ND = NOT DETECTED

RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE

MS=MATRIX SPIKE

MSD=MATRIX SPIKE DUPLICATE

KEMRON ENVIRONMENTAL SERVICES
MARIETTA, OH
QUALITY CONTROL SUMMARY / PCB WATERS , REAR

EXT'N DATE : 11/03/98
EXT'N BENCH SHT : V104P42
EXT'N WORK GRP : WG48767

INSTRUMENT : HP4
ANALYST : ECL
RUN DATE : 11/05/98
ANAL WORK GRP : WG48852

BLK FLNM : 029R0101
LCS FLNM : 030R0101

SMPL ID : 11-011-14
SMPL FLNM : 031R0101
MS FLNM : 032R0101
MSD FLNM : 033R0101

COMPOUND	RDL	CONCENTRATION , ug/L					% RECOVERY									PERCENT						
		Blank	LCS	Sample	MS	MSD	Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	RPD	RPD Advisory Limits	Blank	LCS	Sample	MS	MSD
AROCLOR 1016	0.5	ND	1.82	ND	4.37	4.19	NA	72.9	48	125	NA	87.5	83.8	48	125	4.3	0-40					
AROCLOR 1221	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0-40					
AROCLOR 1232	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0-40					
AROCLOR 1242	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0-40					
AROCLOR 1248	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0-40					
AROCLOR 1254	1.0	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0-40					
AROCLOR 1260	1.0	ND	2.20	ND	4.66	4.81	NA	88.1	59	122	NA	93.1	96.2	59	122	3.2	0-40					
SURROGATES																						
2,4,5,6-TETRACHLORO-M-XYLENE		0.150	0.110	0.127	0.342	0.268	75.0	55.0	13	154	63.5	85.5	67.0	13	154							
DECACHLOROBIPHENYL		0.230	0.158	0.182	0.390	0.395	115.0	79.0	25	140	81.0	97.5	98.8	25	140							

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 2.5 ug/L
SURROGATES spiked at .200 ug/L
NA = NOT APPLICABLE
DL = DILUTED OUT
ND = NOT DETECTED
RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE
MS=MATRIX SPIKE
MSD=MATRIX SPIKE DUPLICATE

NVIRONMENTAL SERVICES

CHAIN-OF-CUSTODY RECORD

Project Contact: Wally Burton

Turn Around Requirements:

Project No.: 4119-007 | Project Name: PACOE Pedricktown

Sampler (print): EKlingbiel | Signature: Erin Klingbiel

Sample I.D. No.	Comp*	Grab	Date	Time	Protocol CWA	Protocol SW846	NUMBER OF SAMPLES	Hold	VOC (40ml) grab	SVOC	Pest/PCB	Cyanide	TSS	ADDITIONAL REQUIREMENTS
JEIR102998	✓	✓	10/29/98				5		1	1	1	1	1	
JEIR102998	✓		↓				1						1	
JEIR102798	✓						1						1	
361029 98		✓					5		1	1	1	1	1	
MIX102998		✓	↓				5		1	1	1	1	1	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Erin Klingbiel	10/29/98	1700					

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:

*Homogenize all composite samples prior to analysis

White – Lab Yellow – Office Pink – Field

Work Order L9810634 Client Vel-mD #of Samples 5 Due Date 11/13 Page 1

Sample #	Analyses	Reason	Removed By ADT	Removed From	MovedTo	Reliq. By	Ret'd by ADT	Ret'd To	Rec'd By	Reason
1-5	TCLP	Anal	DLP 11-02-98/0845	Walk-in	WET	Big	DLP 11-02-98/1045	Archive	Big	Archive
1,4,5	8270	EXT	MK 11-02-98/1400	WALK-IN	E-LAB	Big	SMW 11/03/98 0500	Dumpster	Big	Disposal
1,4,5	8021/RBW	EXT	MK 11-3-98@1400	WALK-IN	E-LAB	Big	SMW 11/04/98 0800	Dumpster	Big	Disposal
1,4,5	8260	Analysis	SLT 11/4/98 1410	V1	Voa	Big	[illegible]	Archive	Big	Archive
1,4,5	CN	AN	[illegible] 11-9-98/0800	WALK IN	WET	Big	[illegible] 11-09-98/0800	Archive	Big	Archive

KEMRON Environmental Services
109 Starli[illegible] Park
Marietta, Oh[illegible] 45750
Phone: (740) 373-4071

Versar, Inc.
9200 Rumsey Road
Columbia, MD 21045-1934

Attention: William Burton

PO Number:
Account Number: VERSAR-MD-331

Login #: L9811029
Report Date: 11/18/98
Work ID: 4119-007/PEDRICKTOWN
Date Received: 11/03/98

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9811029-01	WEIR 1102/GRAB	L9811029-02	WEIR 1102/COMP.
L9811029-03	MIX 1102/GRAB	L9811029-04	INLET 1102/WATER/GRAB
L9811029-05	INLET 1102/SEDIMENT/GRAB	L9811029-06	WEIR 1101/COMP
L9811029-07	WEIR 10/31/COMP	L9811029-08	WEIR 10/30/COMP

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

Certified By
Dennis S. Tepe

KEMRON
ENVIRONMENTAL SERVICES

Order #98-11-029
November 18, 1998
12:38

KEMRON ENVIRONMENTAL SERVICES
REPORT NARRATIVE

SEMIVOLATILE ORGANICS - 8270:
Sample fraction 04 yielded % recoveries for two surrogates that were outside acceptable limits. There was insufficient sample remaining for re-extraction analysis.

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811029-01
Client Sample ID: WEIR 1102/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/04/98
Analysis Date: 11/11/98 Time: 18:56

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/02/98

Instrument: HPMS5
Analyst: MDC
Lab File ID: 8613

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8270C\3510C
Run ID: R56233
Batch : WG49078

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L		ND	10	2
111-44-4	Bis(2-Chloroethyl)ether	ug/L		ND	10	2
95-57-8	2-Chlorophenol	ug/L		ND	10	2
541-73-1	1,3-Dichlorobenzene	ug/L		ND	10	2
106-46-7	1,4-Dichlorobenzene	ug/L		ND	10	2
95-50-1	1,2-Dichlorobenzene	ug/L		ND	10	2
95-48-7	2-Methylphenol	ug/L		ND	10	2
108-60-1	bis(2-Chloroisopropyl)ether	ug/L		ND	10	2
106-44-5	4-Methylphenol	ug/L		ND	10	2
621-64-7	N-Nitroso-di-n-propylamine	ug/L		ND	10	2
67-72-1	Hexachloroethane	ug/L		ND	10	2
98-95-3	Nitrobenzene	ug/L		ND	10	2
78-59-1	Isophorone	ug/L		ND	10	2
88-75-5	2-Nitrophenol	ug/L		ND	10	2
105-67-9	2,4-Dimethylphenol	ug/L		ND	10	2
111-91-1	Bis(2-Chloroethoxy)Methane	ug/L		ND	10	2
120-83-2	2,4-Dichlorophenol	ug/L		ND	10	2
120-82-1	1,2,4-Trichlorobenzene	ug/L		ND	10	2
91-20-3	Naphthalene	ug/L		ND	10	2
106-47-8	4-Chloroaniline	ug/L		ND	10	2
87-68-3	Hexachlorobutadiene	ug/L		ND	10	2
59-50-7	4-Chloro-3-methylphenol	ug/L		ND	10	2
91-57-6	2-Methylnaphthalene	ug/L		ND	10	2
77-47-4	Hexachlorocyclopentadiene	ug/L		ND	10	2
88-06-2	2,4,6-Trichlorophenol	ug/L		ND	10	2
95-95-4	2,4,5-Trichlorophenol	ug/L		ND	50	2
91-58-7	2-Chloronaphthalene	ug/L		ND	10	2
88-74-4	2-Nitroaniline	ug/L		ND	50	2
131-11-3	Dimethylphthalate	ug/L		ND	10	2
208-96-8	Acenaphthylene	ug/L		ND	10	2
606-20-2	2,6-Dinitrotoluene	ug/L		ND	10	2
99-09-2	3-Nitroaniline	ug/L		ND	50	2
83-32-9	Acenaphthene	ug/L		ND	10	2
51-28-5	2,4-Dinitrophenol	ug/L		ND	50	2
100-02-7	4-Nitrophenol	ug/L		ND	50	2
132-64-9	Dibenzofuran	ug/L		ND	10	2
121-14-2	2,4-Dinitrotoluene	ug/L		ND	10	2
84-66-2	Diethylphthalate	ug/L		ND	10	2
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L		ND	10	2

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811029-01
Client Sample ID: WEIR 1102/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/02/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

'CLP Extract Date: N/A
Extract Date: 11/04/98
Analysis Date: 11/11/98 Time: 18:56

Instrument: HPMS5
Analyst: MDC
Lab File ID: 8613

Method: 8270C\3510C
Run ID: R56233
Batch : WG49078

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L		ND	10	2
100-01-6	4-Nitroaniline	ug/L		ND	50	2
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	50	2
86-30-6	N-Nitrosodiphenylamine	ug/L		ND	10	2
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	10	2
118-74-1	Hexachlorobenzene	ug/L		ND	10	2
87-86-5	Pentachlorophenol	ug/L		ND	50	2
85-01-8	Phenanthrene	ug/L		ND	10	2
120-12-7	Anthracene	ug/L		ND	10	2
86-74-8	Carbazole	ug/L		ND	10	2
84-74-2	Di-N-Butylphthalate	ug/L		ND	10	2
206-44-0	Fluoranthene	ug/L		ND	10	2
129-00-0	Pyrene	ug/L		ND	10	2
85-68-7	Butylbenzylphthalate	ug/L		ND	10	2
91-94-1	3,3'-Dichlorobenzidine	ug/L		ND	20	2
56-55-3	Benzo(a)anthracene	ug/L		ND	10	2
218-01-9	Chrysene	ug/L		ND	10	2
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	10	2
117-84-0	Di-n-octylphthalate	ug/L		ND	10	2
205-99-2	Benzo(b)fluoranthene	ug/L		ND	10	2
207-08-9	Benzo(k)fluoranthene	ug/L		ND	10	2
50-32-8	Benzo(a)pyrene	ug/L		ND	10	2
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L		ND	10	2
53-70-3	Dibenzo(a,h)Anthracene	ug/L		ND	10	2
191-24-2	Benzo(g,h,i)Perylene	ug/L		ND	10	2

SURROGATES- In Percent Recovery:

2-Fluorophenol	45.0	(21 - 100%)
Phenol-d5	27.1	(10 - 94%)
Nitrobenzene-d5	63.8	(35 - 114%)
2-Fluorobiphenyl	69.3	(43 - 116%)
2,4,6-Tribromophenol	88.5	(10 - 123%)
p-Terphenyl-d14	94.4	(33 - 141%)

L = Reporting Limit

Login #L98110
November 18, 1998 12:38 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811029-01
Client Sample ID: WEIR 1102/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/06/98 Time: 16:05

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/02/98

Instrument: HPMS9
Analyst: SLT
Lab File ID: 9VR00155

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8260B
Run ID: R55825
Batch : WG49003

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/L		ND	10	1
74-83-9	Bromomethane	ug/L		ND	10	1
75-01-4	Vinyl chloride	ug/L		ND	10	1
75-00-3	Chloroethane	ug/L		ND	10	1
75-09-2	Methylene chloride	ug/L		ND	5.0	1
67-64-1	Acetone	ug/L		ND	10	1
75-15-0	Carbon disulfide	ug/L		ND	5.0	1
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1
75-34-3	1,1-Dichloroethane	ug/L		ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L		ND	5.0	1
67-66-3	Chloroform	ug/L		ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	1
78-93-3	2-Butanone	ug/L		ND	10	1
71-55-6	1,1,1-Trichloroethane	ug/L		ND	5.0	1
56-23-5	Carbon tetrachloride	ug/L		ND	5.0	1
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	1
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	1
79-01-6	Trichloroethene	ug/L		ND	5.0	1
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1
71-43-2	Benzene	ug/L		ND	5.0	1
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	1
75-25-2	Bromoform	ug/L		ND	5.0	1
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	1
591-78-6	2-Hexanone	ug/L		ND	10	1
127-18-4	Tetrachloroethene	ug/L		ND	5.0	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0	1
108-88-3	Toluene	ug/L		ND	5.0	1
108-90-7	Chlorobenzene	ug/L		ND	5.0	1
100-41-4	Ethyl benzene	ug/L		ND	5.0	1
100-42-5	Styrene	ug/L		ND	5.0	1
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1

SURROGATES- In Percent Recovery:

Dibromofluoromethane	104	(86 - 118%)
1,2-Dichloroethane-d4	99.8	(80 - 120%)
Toluene-d8	104	(88 - 110%)
p-Bromofluorobenzene	93.1	(86 - 115%)

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9811029-02
Client Sample ID: WEIR 1102/COMP.
Site/Work ID: 4119-007/PEDRICKTOWN

Matrix: Water
Collected: 11/02/98 0930

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	20		5.0	1	N/A	DLN	11/05/98	14:00	160.2

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811029-02
Client Sample ID: WEIR 1102/COMP.
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/05/98
Analysis Date: 11/09/98 Time: 18:10

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/02/98

Instrument: HP10
Analyst: CDB
Lab File ID: 014F0101

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

Method: 8082/3550
Run ID: R56222
Batch : WG48942

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016.....	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221.....	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232.....	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242.....	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248.....	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254.....	ug/L		ND	1.0	1
11096-82-5	Aroclor-1260.....	ug/L		ND	1.0	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene.....	49.0	(13 - 154%)
Decachlorobiphenyl.....	45.5	(25 - 140%)

L = Reporting Limit

KEMRON ENVIRONM AL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811029-02
Client Sample ID: WEIR 1102/COMP.
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/02/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/05/98
Analysis Date: 11/11/98 Time:

Instrument: HP9
Analyst: ECL
Lab File ID: 1320

Method: 8081A\3510C
Run ID: R56255
Batch : WG49203

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L		ND	0.05	1
319-85-7	beta-BHC	ug/L		ND	0.05	1
319-86-8	delta-BHC	ug/L		ND	0.05	1
58-89-9	gamma-BHC (Lindane)	ug/L		ND	0.05	1
76-44-8	Heptachlor	ug/L		ND	0.05	1
309-00-2	Aldrin	ug/L		ND	0.05	1
1024-57-3	Heptachlor epoxide	ug/L		ND	0.05	1
959-98-8	Endosulfan I	ug/L		ND	0.05	1
60-57-1	Dieldrin	ug/L		ND	0.10	1
72-55-9	4,4'-DDE	ug/L		ND	0.10	1
72-20-8	Endrin	ug/L		ND	0.10	1
33213-65-9	Endosulfan II	ug/L		ND	0.10	1
72-54-8	4,4'-DDD	ug/L		ND	0.10	1
1031-07-8	Endosulfan sulfate	ug/L		ND	0.10	1
50-29-3	4,4'-DDT	ug/L		ND	0.10	1
72-43-5	Methoxychlor	ug/L		ND	0.50	1
53494-70-5	Endrin ketone	ug/L		ND	0.10	1
7421-93-4	Endrin aldehyde	ug/L		ND	0.10	1
5103-71-9	alpha Chlordane	ug/L		ND	0.05	1
5103-74-2	gamma Chlordane	ug/L		ND	0.05	1
8001-35-2	Toxaphene	ug/L		ND	1.0	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	51.8	(13 - 154%)
Decachlorobiphenyl	58.4	(25 - 140%)

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9811029-03
lient Sample ID: MIX 1102/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN

Matrix: Water
Collected: 11/02/98 1100

COC Info: N/A

nalyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
otal Suspended Solids.....	mg/L	26		5.0	1	N/A	DLN	11/05/98	14:00	160.2

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811029-03
Client Sample ID: MIX 1102/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/02/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

CLP Extract Date: N/A
Extract Date: 11/05/98
Analysis Date: 11/09/98 Time: 18:46

Instrument: HP10
Analyst: CDB
Lab File ID: 015F0101

Method: 8082/3550
Run ID: R56222
Batch : WG48942

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016.....	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221.....	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232.....	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242.....	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248.....	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254.....	ug/L		ND	1.0	1
11096-82-5	Aroclor-1260.....	ug/L		ND	1.0	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene.....	43.8	(13 - 154%)
Decachlorobiphenyl.....	27.5	(25 - 140%)

L = Reporting Limit

Login #L9811[illegible]
November 18, 1998 12:38 pm

KEMRON ENVIRONM[illegible]AL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811029-03
Client Sample ID: MIX 1102/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/02/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/05/98
Analysis Date: 11/11/98 Time:

Instrument: HP9
Analyst: ECL
Lab File ID: 1321

Method: 8081A\3510C
Run ID: R56255
Batch : WG49203

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L		ND	0.05	1
319-85-7	beta-BHC	ug/L		ND	0.05	1
319-86-8	delta-BHC	ug/L		ND	0.05	1
58-89-9	gamma-BHC (Lindane)	ug/L		ND	0.05	1
76-44-8	Heptachlor	ug/L		ND	0.05	1
309-00-2	Aldrin	ug/L		ND	0.05	1
1024-57-3	Heptachlor epoxide	ug/L		ND	0.05	1
959-98-8	Endosulfan I	ug/L		ND	0.05	1
60-57-1	Dieldrin	ug/L		ND	0.10	1
72-55-9	4,4'-DDE	ug/L		ND	0.10	1
72-20-8	Endrin	ug/L		ND	0.10	1
33213-65-9	Endosulfan II	ug/L		ND	0.10	1
72-54-8	4,4'-DDD	ug/L		ND	0.10	1
1031-07-8	Endosulfan sulfate	ug/L		ND	0.10	1
50-29-3	4,4'-DDT	ug/L		ND	0.10	1
72-43-5	Methoxychlor	ug/L		ND	0.50	1
53494-70-5	Endrin ketone	ug/L		ND	0.10	1
7421-93-4	Endrin aldehyde	ug/L		ND	0.10	1
5103-71-9	alpha Chlordane	ug/L		ND	0.05	1
5103-74-2	gamma Chlordane	ug/L		ND	0.05	1
8001-35-2	Toxaphene	ug/L		ND	1.0	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	40.1	(13 - 154%)
Decachlorobiphenyl	29.0	(25 - 140%)

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811029-03
Client Sample ID: MIX 1102/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/02/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

CLP Extract Date: N/A
Extract Date: 11/04/98
Analysis Date: 11/11/98 Time: 19:36

Instrument: HPMS5
Analyst: MDC
Lab File ID: 8614

Method: 8270C\3510C
Run ID: R56233
Batch : WG49078

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L		ND	11	2.2
111-44-4	Bis(2-Chloroethyl)ether	ug/L		ND	11	2.2
95-57-8	2-Chlorophenol	ug/L		ND	11	2.2
541-73-1	1,3-Dichlorobenzene	ug/L		ND	11	2.2
106-46-7	1,4-Dichlorobenzene	ug/L		ND	11	2.2
95-50-1	1,2-Dichlorobenzene	ug/L		ND	11	2.2
95-48-7	2-Methylphenol	ug/L		ND	11	2.2
108-60-1	bis(2-Chloroisopropyl)ether	ug/L		ND	11	2.2
106-44-5	4-Methylphenol	ug/L		ND	11	2.2
621-64-7	N-Nitroso-di-n-propylamine	ug/L		ND	11	2.2
67-72-1	Hexachloroethane	ug/L		ND	11	2.2
98-95-3	Nitrobenzene	ug/L		ND	11	2.2
78-59-1	Isophorone	ug/L		ND	11	2.2
88-75-5	2-Nitrophenol	ug/L		ND	11	2.2
105-67-9	2,4-Dimethylphenol	ug/L		ND	11	2.2
111-91-1	Bis(2-Chloroethoxy)Methane	ug/L		ND	11	2.2
120-83-2	2,4-Dichlorophenol	ug/L		ND	11	2.2
120-82-1	1,2,4-Trichlorobenzene	ug/L		ND	11	2.2
91-20-3	Naphthalene	ug/L		ND	11	2.2
106-47-8	4-Chloroaniline	ug/L		ND	11	2.2
87-68-3	Hexachlorobutadiene	ug/L		ND	11	2.2
59-50-7	4-Chloro-3-methylphenol	ug/L		ND	11	2.2
91-57-6	2-Methylnaphthalene	ug/L		ND	11	2.2
77-47-4	Hexachlorocyclopentadiene	ug/L		ND	11	2.2
88-06-2	2,4,6-Trichlorophenol	ug/L		ND	11	2.2
95-95-4	2,4,5-Trichlorophenol	ug/L		ND	55	2.2
91-58-7	2-Chloronaphthalene	ug/L		ND	11	2.2
88-74-4	2-Nitroaniline	ug/L		ND	55	2.2
131-11-3	Dimethylphthalate	ug/L		ND	11	2.2
208-96-8	Acenaphthylene	ug/L		ND	11	2.2
606-20-2	2,6-Dinitrotoluene	ug/L		ND	11	2.2
99-09-2	3-Nitroaniline	ug/L		ND	55	2.2
83-32-9	Acenaphthene	ug/L		ND	11	2.2
51-28-5	2,4-Dinitrophenol	ug/L		ND	55	2.2
100-02-7	4-Nitrophenol	ug/L		ND	55	2.2
132-64-9	Dibenzofuran	ug/L		ND	11	2.2
121-14-2	2,4-Dinitrotoluene	ug/L		ND	11	2.2
84-66-2	Diethylphthalate	ug/L		ND	11	2.2
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L		ND	11	2.2

, = Reporting Limit

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811029-03
Client Sample ID: MIX 1102/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/04/98
Analysis Date: 11/11/98 Time: 19:36

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/02/98

Instrument: HPMS5
Analyst: MDC
Lab File ID: 8614

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8270C\3510C
Run ID: RS6233
Batch : WG49078

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L		ND	11	2.2
100-01-6	4-Nitroaniline	ug/L		ND	55	2.2
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	55	2.2
86-30-6	N-Nitrosodiphenylamine	ug/L		ND	11	2.2
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	11	2.2
118-74-1	Hexachlorobenzene	ug/L		ND	11	2.2
87-86-5	Pentachlorophenol	ug/L		ND	55	2.2
85-01-8	Phenanthrene	ug/L		ND	11	2.2
120-12-7	Anthracene	ug/L		ND	11	2.2
86-74-8	Carbazole	ug/L		ND	11	2.2
84-74-2	Di-N-Butylphthalate	ug/L		ND	11	2.2
206-44-0	Fluoranthene	ug/L		ND	11	2.2
129-00-0	Pyrene	ug/L		ND	11	2.2
85-68-7	Butylbenzylphthalate	ug/L		ND	11	2.2
91-94-1	3,3'-Dichlorobenzidine	ug/L		ND	22	2.2
56-55-3	Benzo(a)anthracene	ug/L		ND	11	2.2
218-01-9	Chrysene	ug/L		ND	11	2.2
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	11	2.2
117-84-0	Di-n-octylphthalate	ug/L		ND	11	2.2
205-99-2	Benzo(b)fluoranthene	ug/L		ND	11	2.2
207-08-9	Benzo(k)fluoranthene	ug/L		ND	11	2.2
50-32-8	Benzo(a)pyrene	ug/L		ND	11	2.2
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L		ND	11	2.2
53-70-3	Dibenzo(a,h)Anthracene	ug/L		ND	11	2.2
191-24-2	Benzo(g,h,i)Perylene	ug/L		ND	11	2.2

SURROGATES- In Percent Recovery:

2-Fluorophenol	49.0	(21 - 100%)
Phenol-d5	29.8	(10 - 94%)
Nitrobenzene-d5	71.4	(35 - 114%)
2-Fluorobiphenyl	76.8	(43 - 116%)
2,4,6-Tribromophenol	108	(10 - 123%)
p-Terphenyl-d14	89.8	(33 - 141%)

RL = Reporting Limit

Login #L9811029
November 18, 1998 12:38 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811029-03
Client Sample ID: MIX 1102/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/02/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/06/98 Time: 16:40

Instrument: HPMS9
Analyst: SLT
Lab File ID: 9VR00156

Method: 8260B
Run ID: R55825
Batch : WG49003

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/L		ND	10	1
74-83-9	Bromomethane	ug/L		ND	10	1
75-01-4	Vinyl chloride	ug/L		ND	10	1
75-00-3	Chloroethane	ug/L		ND	10	1
75-09-2	Methylene chloride	ug/L		ND	5.0	1
67-64-1	Acetone	ug/L		ND	10	1
75-15-0	Carbon disulfide	ug/L		ND	5.0	1
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1
75-34-3	1,1-Dichloroethane	ug/L		ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L		ND	5.0	1
67-66-3	Chloroform	ug/L		ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	1
78-93-3	2-Butanone	ug/L		ND	10	1
71-55-6	1,1,1-Trichloroethane	ug/L		ND	5.0	1
56-23-5	Carbon tetrachloride	ug/L		ND	5.0	1
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	1
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	1
79-01-6	Trichloroethene	ug/L		ND	5.0	1
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1
71-43-2	Benzene	ug/L		ND	5.0	1
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	1
75-25-2	Bromoform	ug/L		ND	5.0	1
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	1
591-78-6	2-Hexanone	ug/L		ND	10	1
127-18-4	Tetrachloroethene	ug/L		ND	5.0	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0	1
108-88-3	Toluene	ug/L		ND	5.0	1
108-90-7	Chlorobenzene	ug/L		ND	5.0	1
100-41-4	Ethyl benzene	ug/L		ND	5.0	1
100-42-5	Styrene	ug/L		ND	5.0	1
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1

SURROGATES- In Percent Recovery:

Dibromofluoromethane	104	(86 - 118%)
1,2-Dichloroethane-d4	101	(80 - 120%)
Toluene-d8	104	(88 - 110%)
p-Bromofluorobenzene	92.1	(86 - 115%)

RL = Reporting Limit

Lab Sample ID: L9811029-04
Client Sample ID: INLET 1102/WATER/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN

Matrix: Water
Collected: 11/02/98 1100

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	88000		200	40	N/A	DLN	11/05/98	14:00	160.2

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811029-04
Client Sample ID: INLET 1102/WATER/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/05/98
Analysis Date: 11/11/98 Time: 11:51

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/02/98

Instrument: HP10
Analyst: CDB
Lab File ID: 052R0101

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8082/3550
Run ID: R56338
Batch : WG48942

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016.....	ug/L		ND	0.95	1.9
11104-28-2	Aroclor-1221.....	ug/L		ND	0.95	1.9
11141-16-5	Aroclor-1232.....	ug/L		ND	0.95	1.9
53469-21-9	Aroclor-1242.....	ug/L		ND	0.95	1.9
12672-29-6	Aroclor-1248.....	ug/L		ND	0.95	1.9
11097-69-1	Aroclor-1254.....	ug/L		ND	1.9	1.9
11096-82-5	Aroclor-1260.....	ug/L		ND	1.9	1.9

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene.....	6.66	*	(13 - 154%)
Decachlorobiphenyl.....	28.4		(25 - 140%)

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811029-04
Client Sample ID: INLET 1102/WATER/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/02/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/05/98
Analysis Date: 11/11/98 Time:

Instrument: HP9
Analyst: ECL
Lab File ID: 1322

Method: 8081A\3510C
Run ID: R56255
Batch : WG49203

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L		ND	0.10	2
319-85-7	beta-BHC	ug/L		ND	0.10	2
319-86-8	delta-BHC	ug/L		ND	0.10	2
58-89-9	gamma-BHC (Lindane)	ug/L		ND	0.10	2
76-44-8	Heptachlor	ug/L		ND	0.10	2
309-00-2	Aldrin	ug/L		ND	0.10	2
1024-57-3	Heptachlor epoxide	ug/L		ND	0.10	2
959-98-8	Endosulfan I	ug/L		ND	0.10	2
60-57-1	Dieldrin	ug/L		ND	0.20	2
72-55-9	4,4'-DDE	ug/L		ND	0.20	2
72-20-8	Endrin	ug/L		ND	0.20	2
33213-65-9	Endosulfan II	ug/L		ND	0.20	2
72-54-8	4,4'-DDD	ug/L	0.35		0.20	2
1031-07-8	Endosulfan sulfate	ug/L		ND	0.20	2
50-29-3	4,4'-DDT	ug/L		ND	0.20	2
72-43-5	Methoxychlor	ug/L		ND	1.0	2
53494-70-5	Endrin ketone	ug/L		ND	0.20	2
7421-93-4	Endrin aldehyde	ug/L		ND	0.20	2
5103-71-9	alpha Chlordane	ug/L		ND	0.10	2
5103-74-2	gamma Chlordane	ug/L		ND	0.10	2
8001-35-2	Toxaphene	ug/L		ND	2.0	2

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	9.30	*	(13 - 154%)
Decachlorobiphenyl	44.7		(25 - 140%)

L = Reporting Limit

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811029-04
Client Sample ID: INLET 1102/WATER/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/04/98
Analysis Date: 11/12/98 Time: 13:23

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/02/98

Instrument: HPMS5
Analyst: MDC
Lab File ID: 8633

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8270C\3510C
Run ID: R56337
Batch : WG49078

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L		ND	17	3.3
111-44-4	Bis(2-Chloroethyl)ether	ug/L		ND	17	3.3
95-57-8	2-Chlorophenol	ug/L		ND	17	3.3
541-73-1	1,3-Dichlorobenzene	ug/L		ND	17	3.3
106-46-7	1,4-Dichlorobenzene	ug/L		ND	17	3.3
95-50-1	1,2-Dichlorobenzene	ug/L		ND	17	3.3
95-48-7	2-Methylphenol	ug/L		ND	17	3.3
108-60-1	bis(2-Chloroisopropyl)ether	ug/L		ND	17	3.3
106-44-5	4-Methylphenol	ug/L		ND	17	3.3
621-64-7	N-Nitroso-di-n-propylamine	ug/L		ND	17	3.3
67-72-1	Hexachloroethane	ug/L		ND	17	3.3
98-95-3	Nitrobenzene	ug/L		ND	17	3.3
78-59-1	Isophorone	ug/L		ND	17	3.3
88-75-5	2-Nitrophenol	ug/L		ND	17	3.3
105-67-9	2,4-Dimethylphenol	ug/L		ND	17	3.3
111-91-1	Bis(2-Chloroethoxy)Methane	ug/L		ND	17	3.3
120-83-2	2,4-Dichlorophenol	ug/L		ND	17	3.3
120-82-1	1,2,4-Trichlorobenzene	ug/L		ND	17	3.3
91-20-3	Naphthalene	ug/L		ND	17	3.3
106-47-8	4-Chloroaniline	ug/L		ND	17	3.3
87-68-3	Hexachlorobutadiene	ug/L		ND	17	3.3
59-50-7	4-Chloro-3-methylphenol	ug/L		ND	17	3.3
91-57-6	2-Methylnaphthalene	ug/L		ND	17	3.3
77-47-4	Hexachlorocyclopentadiene	ug/L		ND	17	3.3
88-06-2	2,4,6-Trichlorophenol	ug/L		ND	17	3.3
95-95-4	2,4,5-Trichlorophenol	ug/L		ND	83	3.3
91-58-7	2-Chloronaphthalene	ug/L		ND	17	3.3
88-74-4	2-Nitroaniline	ug/L		ND	83	3.3
131-11-3	Dimethylphthalate	ug/L		ND	17	3.3
208-96-8	Acenaphthylene	ug/L		ND	17	3.3
606-20-2	2,6-Dinitrotoluene	ug/L		ND	17	3.3
99-09-2	3-Nitroaniline	ug/L		ND	83	3.3
83-32-9	Acenaphthene	ug/L		ND	17	3.3
51-28-5	2,4-Dinitrophenol	ug/L		ND	83	3.3
100-02-7	4-Nitrophenol	ug/L		ND	83	3.3
132-64-9	Dibenzofuran	ug/L		ND	17	3.3
121-14-2	2,4-Dinitrotoluene	ug/L		ND	17	3.3
84-66-2	Diethylphthalate	ug/L		ND	17	3.3
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L		ND	17	3.3

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811029-04
Client Sample ID: INLET 1102/WATER/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/02/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/04/98
Analysis Date: 11/12/98 Time: 13:23

Instrument: HPMS5
Analyst: MDC
Lab File ID: 8633

Method: 8270C\3510C
Run ID: R56337
Batch : WG49078

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L		ND	17	3.3
100-01-6	4-Nitroaniline	ug/L		ND	83	3.3
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	83	3.3
86-30-6	N-Nitrosodiphenylamine	ug/L		ND	17	3.3
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	17	3.3
118-74-1	Hexachlorobenzene	ug/L		ND	17	3.3
87-86-5	Pentachlorophenol	ug/L		ND	83	3.3
85-01-8	Phenanthrene	ug/L		ND	17	3.3
120-12-7	Anthracene	ug/L		ND	17	3.3
86-74-8	Carbazole	ug/L		ND	17	3.3
84-74-2	Di-N-Butylphthalate	ug/L		ND	17	3.3
206-44-0	Fluoranthene	ug/L		ND	17	3.3
129-00-0	Pyrene	ug/L		ND	17	3.3
85-68-7	Butylbenzylphthalate	ug/L		ND	17	3.3
91-94-1	3,3'-Dichlorobenzidine	ug/L		ND	33	3.3
56-55-3	Benzo(a)anthracene	ug/L		ND	17	3.3
218-01-9	Chrysene	ug/L		ND	17	3.3
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	17	3.3
117-84-0	Di-n-octylphthalate	ug/L		ND	17	3.3
205-99-2	Benzo(b)fluoranthene	ug/L		ND	17	3.3
207-08-9	Benzo(k)fluoranthene	ug/L		ND	17	3.3
50-32-8	Benzo(a)pyrene	ug/L		ND	17	3.3
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L		ND	17	3.3
53-70-3	Dibenzo(a,h)Anthracene	ug/L		ND	17	3.3
191-24-2	Benzo(g,h,i)Perylene	ug/L		ND	17	3.3

SURROGATES- In Percent Recovery:

2-Fluorophenol	31.5		(21 - 100%)
Phenol-d5	21.4		(10 - 94%)
Nitrobenzene-d5	39.2		(35 - 114%)
2-Fluorobiphenyl	18.6	*	(43 - 116%)
2,4,6-Tribromophenol	21.9		(10 - 123%)
p-Terphenyl-d14	29.3	*	(33 - 141%)

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811029-04
Client Sample ID: INLET 1102/WATER/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/07/98 Time: 22:20

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/02/98

Instrument: HPMS2
Analyst: SLT
Lab File ID: 2VR27446

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8260B
Run ID: R55854
Batch : WG49020

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/L		ND	10	1
74-83-9	Bromomethane	ug/L		ND	10	1
75-01-4	Vinyl chloride	ug/L		ND	10	1
75-00-3	Chloroethane	ug/L		ND	10	1
75-09-2	Methylene chloride	ug/L		ND	5.0	1
67-64-1	Acetone	ug/L		ND	10	1
75-15-0	Carbon disulfide	ug/L		ND	5.0	1
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1
75-34-3	1,1-Dichloroethane	ug/L		ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L		ND	5.0	1
67-66-3	Chloroform	ug/L		ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	1
78-93-3	2-Butanone	ug/L		ND	10	1
71-55-6	1,1,1-Trichloroethane	ug/L		ND	5.0	1
56-23-5	Carbon tetrachloride	ug/L		ND	5.0	1
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	1
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	1
79-01-6	Trichloroethene	ug/L		ND	5.0	1
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1
71-43-2	Benzene	ug/L		ND	5.0	1
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	1
75-25-2	Bromoform	ug/L		ND	5.0	1
108-10-1	4-Methyl-2-pentanone	ug/L		ND	5.0	1
591-78-6	2-Hexanone	ug/L		ND	10	1
127-18-4	Tetrachloroethene	ug/L		ND	10	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0	1
108-88-3	Toluene	ug/L		ND	5.0	1
108-90-7	Chlorobenzene	ug/L		ND	5.0	1
100-41-4	Ethyl benzene	ug/L		ND	5.0	1
100-42-5	Styrene	ug/L		ND	5.0	1
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1

SURROGATES- In Percent Recovery:

Dibromofluoromethane	88.5	(86 - 118%)
1,2-Dichloroethane-d4	86.7	(80 - 120%)
Toluene-d8	92.3	(88 - 110%)
p-Bromofluorobenzene	96.5	(86 - 115%)

RL = Reporting Limit

Login #L9811029
November 18, 1998 12:38 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PCB-S - PCB's (Soil)

Lab Sample ID: L9811029-05
Client Sample ID: INLET 1102/SEDIMENT/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Soil

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/02/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: 19

TCLP Extract Date: N/A
Extract Date: 11/06/98
Analysis Date: 11/11/98 Time: 12:27

Instrument: HP10
Analyst: CDB
Lab File ID: 053R0101

Method: 8082/3550
Run ID: R56339
Batch : WG49025

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/kg		ND	87	1
11104-28-2	Aroclor-1221	ug/kg		ND	87	1
11141-16-5	Aroclor-1232	ug/kg		ND	87	1
53469-21-9	Aroclor-1242	ug/kg		ND	87	1
12672-29-6	Aroclor-1248	ug/kg		ND	87	1
11097-69-1	Aroclor-1254	ug/kg		ND	170	1
11096-82-5	Aroclor-1260	ug/kg		ND	170	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	139	*	(29 - 133%)
Decachlorobiphenyl	215	*	(30 - 173%)

Lab Sample ID: L9811029-05
Client Sample ID: INLET 1102/SEDIMENT/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN

Matrix: Soil
Collected: 11/02/98 1100

% Solid: 19
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids	% wt.	19		1.0	1	N/A	DIH	11/06/98	12:45	D2216-90

RL = Reporting Limit

KEMRON ENVIRONM[illegible]TAL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811029-05
Client Sample ID: INLET 1102/SEDIMENT/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Soil

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/02/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: 19

TCLP Extract Date: N/A
Extract Date: 11/06/98
Analysis Date: 11/11/98 Time:

Instrument: HP9
Analyst: ECL
Lab File ID: 1315

Method: 8081A\3550B
Run ID: R56256
Batch : WG49204

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/kg		ND	8.7	1
319-85-7	beta-BHC	ug/kg		ND	8.7	1
319-86-8	delta-BHC	ug/kg		ND	8.7	1
58-89-9	gamma-BHC (Lindane)	ug/kg		ND	8.7	1
76-44-8	Heptachlor	ug/kg		ND	8.7	1
309-00-2	Aldrin	ug/kg		ND	8.7	1
1024-57-3	Heptachlor epoxide	ug/kg		ND	8.7	1
959-98-8	Endosulfan I	ug/kg		ND	8.7	1
60-57-1	Dieldrin	ug/kg		ND	17	1
72-55-9	4,4'-DDE	ug/kg		ND	17	1
72-20-8	Endrin	ug/kg		ND	17	1
33213-65-9	Endosulfan II	ug/kg		ND	17	1
72-54-8	4,4'-DDD	ug/kg	31		17	1
1031-07-8	Endosulfan sulfate	ug/kg		ND	17	1
50-29-3	4,4'-DDT	ug/kg		ND	17	1
72-43-5	Methoxychlor	ug/kg		ND	87	1
53494-70-5	Endrin ketone	ug/kg		ND	17	1
7421-93-4	Endrin aldehyde	ug/kg		ND	17	1
5103-71-9	alpha Chlordane	ug/kg		ND	8.7	1
5103-74-2	gamma Chlordane	ug/kg		ND	8.7	1
8001-35-2	Toxaphene	ug/kg		ND	170	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	67.8	(29 - 133%)
Decachlorobiphenyl	123	(30 - 173%)

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811029-05
Client Sample ID: INLET 1102/SEDIMENT/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Soil

'CLP Extract Date: N/A
Extract Date: 11/09/98
Analysis Date: 11/12/98 Time: 12:31

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/02/98

Instrument: HPMS4
Analyst: MLS
Lab File ID: 12105

Sample Weight: N/A
Extract Volume: N/A

% Solid: 19

Method: 8270C\3550B
Run ID: R56333
Batch : WG49125

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
108-95-2	Phenol	ug/kg		ND	1700	2
111-44-4	Bis(2-Chloroethyl)ether	ug/kg		ND	1700	2
95-57-8	2-Chlorophenol	ug/kg		ND	1700	2
541-73-1	1,3-Dichlorobenzene	ug/kg		ND	1700	2
106-46-7	1,4-Dichlorobenzene	ug/kg		ND	1700	2
95-50-1	1,2-Dichlorobenzene	ug/kg		ND	1700	2
95-48-7	2-Methylphenol	ug/kg		ND	1700	2
108-60-1	bis(2-Chloroisopropyl)ether	ug/kg		ND	1700	2
106-44-5	4-Methylphenol	ug/kg		ND	1700	2
621-64-7	N-Nitroso-di-n-propylamine	ug/kg		ND	1700	2
67-72-1	Hexachloroethane	ug/kg		ND	1700	2
98-95-3	Nitrobenzene	ug/kg		ND	1700	2
78-59-1	Isophorone	ug/kg		ND	1700	2
88-75-5	2-Nitrophenol	ug/kg		ND	1700	2
105-67-9	2,4-Dimethylphenol	ug/kg		ND	1700	2
111-91-1	Bis(2-Chloroethoxy)Methane	ug/kg		ND	1700	2
120-83-2	2,4-Dichlorophenol	ug/kg		ND	1700	2
120-82-1	1,2,4-Trichlorobenzene	ug/kg		ND	1700	2
91-20-3	Naphthalene	ug/kg		ND	1700	2
106-47-8	4-Chloroaniline	ug/kg		ND	1700	2
87-68-3	Hexachlorobutadiene	ug/kg		ND	1700	2
59-50-7	4-Chloro-3-methylphenol	ug/kg		ND	1700	2
91-57-6	2-Methylnaphthalene	ug/kg		ND	1700	2
77-47-4	Hexachlorocyclopentadiene	ug/kg		ND	1700	2
88-06-2	2,4,6-Trichlorophenol	ug/kg		ND	1700	2
95-95-4	2,4,5-Trichlorophenol	ug/kg		ND	8700	2
91-58-7	2-Chloronaphthalene	ug/kg		ND	1700	2
88-74-4	2-Nitroaniline	ug/kg		ND	8700	2
131-11-3	Dimethylphthalate	ug/kg		ND	1700	2
208-96-8	Acenaphthylene	ug/kg		ND	1700	2
606-20-2	2,6-Dinitrotoluene	ug/kg		ND	1700	2
99-09-2	3-Nitroaniline	ug/kg		ND	8700	2
83-32-9	Acenaphthene	ug/kg		ND	1700	2
51-28-5	2,4-Dinitrophenol	ug/kg		ND	8700	2
100-02-7	4-Nitrophenol	ug/kg		ND	8700	2
132-64-9	Dibenzofuran	ug/kg		ND	1700	2
121-14-2	2,4-Dinitrotoluene	ug/kg		ND	1700	2
84-66-2	Diethylphthalate	ug/kg		ND	1700	2
7005-72-3	4-Chlorophenyl-phenyl ether	ug/kg		ND	1700	2

L = Reporting Limit

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811029-05
Client Sample ID: INLET 1102/SEDIMENT/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Soil

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/02/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: 19

TCLP Extract Date: N/A
Extract Date: 11/09/98
Analysis Date: 11/12/98 Time: 12:31

Instrument: HPMS4
Analyst: MLS
Lab File ID: 12105

Method: 8270C\3550B
Run ID: R56333
Batch : WG49125

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/kg		ND	1700	2
100-01-6	4-Nitroaniline	ug/kg		ND	8700	2
534-52-1	4,6-Dinitro-2-methylphenol	ug/kg		ND	8700	2
86-30-6	N-Nitrosodiphenylamine	ug/kg		ND	1700	2
101-55-3	4-Bromophenyl-phenylether	ug/kg		ND	1700	2
118-74-1	Hexachlorobenzene	ug/kg		ND	1700	2
87-86-5	Pentachlorophenol	ug/kg		ND	8700	2
85-01-8	Phenanthrene	ug/kg		ND	1700	2
120-12-7	Anthracene	ug/kg		ND	1700	2
86-74-8	Carbazole	ug/kg		ND	1700	2
84-74-2	Di-N-Butylphthalate	ug/kg		ND	1700	2
206-44-0	Fluoranthene	ug/kg		ND	1700	2
129-00-0	Pyrene	ug/kg		ND	1700	2
85-68-7	Butylbenzylphthalate	ug/kg		ND	1700	2
91-94-1	3,3'-Dichlorobenzidine	ug/kg		ND	3500	2
56-55-3	Benzo(a)anthracene	ug/kg		ND	1700	2
218-01-9	Chrysene	ug/kg		ND	1700	2
117-81-7	bis(2-Ethylhexyl)phthalate	ug/kg		ND	1700	2
117-84-0	Di-n-octylphthalate	ug/kg		ND	1700	2
205-99-2	Benzo(b)fluoranthene	ug/kg		ND	1700	2
207-08-9	Benzo(k)fluoranthene	ug/kg		ND	1700	2
50-32-8	Benzo(a)pyrene	ug/kg		ND	1700	2
193-39-5	Indeno(1,2,3-cd)pyrene	ug/kg		ND	1700	2
53-70-3	Dibenzo(a,h)Anthracene	ug/kg		ND	1700	2
191-24-2	Benzo(g,h,i)Perylene	ug/kg		ND	1700	2

SURROGATES- In Percent Recovery:

2-Fluorophenol	37.4	(25 - 121%)
Phenol-d5	43.4	(24 - 113%)
Nitrobenzene-d5	43.6	(23 - 120%)
2-Fluorobiphenyl	49.6	(30 - 115%)
2,4,6-Tribromophenol	58.6	(19 - 122%)
P-Terphenyl-d14	76.2	(18 - 137%)

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811029-05
Client Sample ID: INLET 1102/SEDIMENT/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Soil

Dil. Type: N/A
COC Info: N/A

Sample Weight: N/A
Extract Volume: N/A

Date Collected: 11/02/98

% Solid: 19

CLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/07/98 Time: 01:23

Instrument: HPMS6
Analyst: CMS
Lab File ID: 6LA11262

Method: 8260B
Run ID: R55846
Batch : WG49008

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/kg		ND	53	1
74-83-9	Bromomethane	ug/kg		ND	53	1
75-01-4	Vinyl chloride	ug/kg		ND	53	1
75-00-3	Chloroethane	ug/kg		ND	53	1
75-09-2	Methylene chloride	ug/kg		ND	26	1
67-64-1	Acetone	ug/kg		ND	53	1
75-15-0	Carbon disulfide	ug/kg		ND	26	1
75-35-4	1,1-Dichloroethene	ug/kg		ND	26	1
75-34-3	1,1-Dichloroethane	ug/kg		ND	26	1
540-59-0	1,2-Dichloroethene (Total)	ug/kg		ND	26	1
67-66-3	Chloroform	ug/kg		ND	26	1
107-06-2	1,2-Dichloroethane	ug/kg		ND	26	1
78-93-3	2-Butanone	ug/kg		ND	53	1
71-55-6	1,1,1-Trichloroethane	ug/kg		ND	26	1
56-23-5	Carbon tetrachloride	ug/kg		ND	26	1
75-27-4	Bromodichloromethane	ug/kg		ND	26	1
78-87-5	1,2-Dichloropropane	ug/kg		ND	26	1
10061-01-5	cis-1,3-Dichloropropene	ug/kg		ND	26	1
79-01-6	Trichloroethene	ug/kg		ND	26	1
124-48-1	Dibromochloromethane	ug/kg		ND	26	1
79-00-5	1,1,2-Trichloroethane	ug/kg		ND	26	1
71-43-2	Benzene	ug/kg		ND	26	1
10061-02-6	trans-1,3-Dichloropropene	ug/kg		ND	26	1
75-25-2	Bromoform	ug/kg		ND	26	1
108-10-1	4-Methyl-2-pentanone	ug/kg		ND	53	1
591-78-6	2-Hexanone	ug/kg		ND	53	1
127-18-4	Tetrachloroethene	ug/kg		ND	26	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/kg		ND	26	1
108-88-3	Toluene	ug/kg		ND	26	1
108-90-7	Chlorobenzene	ug/kg		ND	26	1
100-41-4	Ethyl benzene	ug/kg		ND	26	1
100-42-5	Styrene	ug/kg		ND	26	1
1330-20-7	Xylenes, Total	ug/kg		ND	26	1

SURROGATES- In Percent Recovery:

Dibromofluoromethane	111	(80 - 120%)
1,2-Dichloroethane-d4	117	(80 - 120%)
Toluene-d8	115	(81 - 117%)
p-Bromofluorobenzene	116	(74 - 121%)

RL = Reporting Limit

Lab Sample ID: L9811029-06
Client Sample ID: WEIR 1101/COMP
Site/Work ID: 4119-007/PEDRICKTOWN

Matrix: Water
Collected: 11/02/98 0930

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	18		5.0	1	N/A	DLN	11/05/98	14:00	160.2

Lab Sample ID: L9811029-07
Client Sample ID: WEIR 10/31/COMP
Site/Work ID: 4119-007/PEDRICKTOWN

Matrix: Water
Collected: 11/02/98 0930

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	16		5.0	1	N/A	DLN	11/05/98	14:00	160.2

Lab Sample ID: L9811029-08
Client Sample ID: WEIR 10/30/COMP
Site/Work ID: 4119-007/PEDRICKTOWN

Matrix: Water
Collected: 11/02/98 0930

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	24		5.0	1	N/A	DLN	11/05/98	14:00	160.2

RL = Reporting Limit

INORGANIC QA/QC

Kemron
ENVIRONMENTAL SERVICES

KEMRON ENVIRONMENTAL SERVICES
OHIO VA[illegible] LABORATORY
QUALITY [illegible]TROL SUMMARY

WORKGROUP: wg48951
METHOD: 160.2
MATRIX: Water
UNITS: mg/L

RUN DATE: 11/5/98
ANALYST: dln
DUPLICATE: 11-029-04

ANALYTE	RDL	Blank	T-LCS	LCS	REP1	REP2	SAMPLE RESULT	T-MS	MS	PERCENT RECOVERY LCS	LCS LCL	LCS UCL	MS	MS LCL	MS UCL	PERCENT RPD REP RPD	RPD UCL
TSS	5.00	ND	50.00	43.00	87880.00	107280.00	NR	NR	NR	86.0	83.5	120.0	NR	NR	NR	19.88	20.00

NOTES & DEFINITIONS :
RDL = REPORTING DETECTION LIMIT
DL = DILUTED OUT
NA = NOT APPLICABLE
ND = NOT DETECTED
NR = NOT REQUIRED

LCS = LABORATORY CONTROL SAMPLE
T- LCS = TRUE VALUE OF LCS
REP1 = UNSPIKED SAMPLE REPLICATE 1
REP2 = UNSPIKED SAMPLE REPLICATE 2
SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX
T-MS = TRUE VALUE OF MATRIX SPIKE
MS = MATRIX SPIKE
LCL = LOWER CONTROL LIMIT
UCL = UPPER CONTROL LIMIT

REP RPD = RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES

ORGANIC QA/QC

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49003	Run Date:	11/6/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_9	SMPL Num:	10-622-06	SMPL DF:	10
Matrix:	Water	BLK FLNM:	9BK00145	SMPL FLNM:	9BR00148	MS DF:	10
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	9BR00149	MSD DF:	10
		LCS FLNM:	9QC00146	MSD FLNM:	9BR00150		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
	RDL	BLK	BLK2	LCS	LCS2	LCS Spike Level	SMPL	MS	MSD	MS Spike Level	LCS	LCS2	LCS LCL	LCS UCL	MS	MSD	MS LCL	MS UCL	MS RPD	RPD UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
dichlorodifluoromethane	10.0	ND	ND	12.4	NA	20.0	ND	10.3	10.6	20.0	61.8	NA	38.0	148.0	51.3	53.2	60.0	140.0	3.7	20.0
chloromethane	10.0	ND	ND	18.5	NA	20.0	ND	16.4	17.6	20.0	92.7	NA	56.0	132.0	82.2	88.2	D	273.0	7.1	20.0
vinyl chloride	10.0	ND	ND	25.6	NA	20.0	ND	22.5	22.4	20.0	128.1	NA	68.0	125.0	112.3	112.0	D	251.0	0.2	20.0
bromomethane	10.0	ND	ND	24.9	NA	20.0	ND	22.4	22.7	20.0	124.7	NA	55.0	138.0	112.1	113.7	D	242.0	1.5	20.0
chloroethane	10.0	ND	ND	21.1	NA	20.0	ND	19.6	18.7	20.0	105.6	NA	57.0	128.0	97.9	93.3	14.0	230.0	4.8	20.0
trichlorofluoromethane	10.0	ND	ND	21.1	NA	20.0	ND	18.8	17.6	20.0	105.6	NA	70.0	127.0	93.8	87.9	17.0	181.0	6.4	20.0
freon 113	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	70.0	130.0	NA	20.0
acetone	100.0	ND	ND	15.7	NA	20.0	14.9	29.8	31.5	20.0	78.7	NA	44.0	114.0	74.7	83.1	70.0	130.0	5.5	20.0
1,1-dichloroethene	5.0	ND	ND	22.2	NA	20.0	ND	19.9	18.8	20.0	110.8	NA	69.0	144.0	99.3	94.1	D	234.0	5.4	20.0
iodomethane	NTC	ND	ND	15.7	NA	20.0	ND	14.8	15.1	20.0	78.5	NA	NA	NA	73.8	75.6	70.0	130.0	2.3	20.0
methylene chloride	5.0	ND	ND	23.6	NA	20.0	ND	21.1	21.5	20.0	117.8	NA	71.0	128.0	105.6	107.6	D	221.0	1.8	20.0
carbon disulfide	5.0	ND	ND	21.6	NA	20.0	ND	18.4	18.7	20.0	108.0	NA	67.0	136.0	92.2	93.7	70.0	130.0	1.6	20.0
acrylonitrile	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	70.0	130.0	NA	20.0
trans-1,2-dichloroethene	5.0	ND	ND	24.0	NA	20.0	ND	22.2	21.8	20.0	120.0	NA	85.0	133.0	110.9	109.0	54.0	156.0	1.7	20.0
vinyl acetate	10.0	ND	ND	19.4	NA	20.0	ND	18.9	19.1	20.0	96.9	NA	9.0	236.0	94.4	95.6	9.0	236.0	1.2	20.0
1,1-dichloroethane	5.0	ND	ND	22.6	NA	20.0	ND	21.3	21.3	20.0	112.9	NA	82.0	124.0	106.4	106.7	59.0	155.0	0.3	20.0
2-butanone	100.0	ND	ND	20.0	NA	20.0	12.6	30.0	30.2	20.0	100.0	NA	43.0	140.0	86.8	87.7	70.0	130.0	0.6	20.0
2,2-dichloropropane	5.0	ND	ND	23.3	NA	20.0	ND	21.0	20.3	20.0	116.4	NA	77.0	126.0	104.9	101.3	60.0	140.0	3.4	20.0
cis-1,2-dichloroethene	5.0	ND	ND	21.4	NA	20.0	ND	20.4	20.7	20.0	107.0	NA	69.0	130.0	101.9	103.3	60.0	140.0	1.4	20.0
chloroform	5.0	ND	ND	22.8	NA	20.0	ND	21.4	21.4	20.0	113.8	NA	83.0	121.0	107.1	107.2	51.0	138.0	0.1	20.0

Notes and Definitions:

RDL = Reporting Detection Limit
BLK = Method Blank
BLK2 = Second Method Blank
LCS = Laboratory Control Sample
LCS2 = Second Laboratory Control Sample
SMPL = Sample Results
MS/MSD = Matrix Spike / Matrix Spike Duplicate
LCL = Lower Control Limit
UCL = Upper Control Limit
RPD = Relative Percent Difference

ND = Not Detected
NA = Not Applicable

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49003	Run Date:	11/6/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_9	SMPL Num:	10-622-06	SMPL DF:	10
Matrix:	Water	BLK FLNM:	9BK00145	SMPL FLNM:	9BR00148	MS DF:	10
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	9BR00149	MSD DF:	10
		LCS FLNM:	9QC00146	MSD FLNM:	9BR00150		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
bromochloromethane	5.0	ND	ND	22.4	NA	20.0	ND	21.7	22.4	20.0	112.1	NA	85.0	118.0	108.7	111.8	60.0	140.0	2.8	20.0
1,1,1-trichloroethane	5.0	ND	ND	23.5	NA	20.0	ND	20.1	19.7	20.0	117.4	NA	74.0	125.0	100.5	98.3	62.0	162.0	2.2	20.0
1,1-dichloropropene	5.0	ND	ND	23.9	NA	20.0	ND	21.9	21.1	20.0	119.3	NA	85.0	126.0	109.4	105.5	60.0	140.0	3.6	20.0
carbon tetrachloride	5.0	ND	ND	24.9	NA	20.0	ND	21.5	20.8	20.0	124.5	NA	73.0	129.0	107.5	104.2	70.0	140.0	3.1	20.0
1,2-dichloroethane	5.0	ND	ND	21.9	NA	20.0	ND	21.6	21.9	20.0	109.3	NA	76.0	123.0	108.0	109.4	49.0	155.0	1.3	20.0
benzene	5.0	ND	ND	23.2	NA	20.0	ND	20.7	20.4	20.0	116.1	NA	86.0	118.0	103.3	102.1	37.0	151.0	1.1	20.0
trichloroethene	5.0	ND	ND	23.2	NA	20.0	ND	20.2	19.7	20.0	116.0	NA	82.0	120.0	100.8	98.3	71.0	157.0	2.5	20.0
1,2-dichloropropane	5.0	ND	ND	22.0	NA	20.0	ND	21.0	21.2	20.0	110.1	NA	74.0	126.0	105.0	106.0	D	210.0	0.9	20.0
bromodichloromethane	5.0	ND	ND	23.4	NA	20.0	ND	22.5	22.7	20.0	117.1	NA	74.0	126.0	112.7	113.4	35.0	155.0	0.6	20.0
dibromomethane	5.0	ND	ND	21.9	NA	20.0	ND	21.4	21.7	20.0	109.6	NA	78.0	125.0	106.8	108.3	60.0	140.0	1.4	20.0
2-chloroethylvinyl-ether	10.0	ND	ND	19.4	NA	20.0	ND	18.4	18.3	20.0	96.8	NA	50.0	151.0	92.1	91.6	70.0	130.0	ND	20.0
4-methyl-2-pentanone	10.0	ND	ND	18.5	NA	20.0	ND	24.0	24.9	20.0	92.7	NA	79.0	127.0	120.0	124.6	70.0	130.0	3.8	20.0
cis-1,3-dichloropropene	5.0	ND	ND	23.1	NA	20.0	ND	21.9	22.1	20.0	115.3	NA	77.0	123.0	109.5	110.7	D	227.0	1.1	20.0
toluene	5.0	ND	ND	22.0	NA	20.0	9.0	28.8	28.4	20.0	109.8	NA	83.0	119.0	99.3	96.9	47.0	150.0	1.7	20.0
trans-1,3-dichloropropene	5.0	ND	ND	20.4	NA	20.0	ND	19.3	19.3	20.0	102.1	NA	74.0	124.0	96.7	96.6	17.0	183.0	0.1	20.0
1,1,2-trichloroethane	5.0	ND	ND	20.2	NA	20.0	ND	19.0	19.0	20.0	101.0	NA	72.0	119.0	95.1	95.2	52.0	150.0	0.1	20.0
2-hexanone	10.0	ND	ND	17.1	NA	20.0	ND	23.2	19.5	20.0	85.6	NA	55.0	114.0	115.9	97.5	70.0	130.0	17.3	20.0
1,3-dichloropropane	5.0	ND	ND	19.6	NA	20.0	ND	18.8	19.1	20.0	98.0	NA	73.0	122.0	94.2	95.6	60.0	140.0	1.5	20.0
tetrachloroethene	5.0	ND	ND	21.4	NA	20.0	ND	18.8	17.7	20.0	107.2	NA	82.0	120.0	94.1	88.4	64.0	148.0	6.2	20.0
dibromochloromethane	5.0	ND	ND	21.3	NA	20.0	ND	20.4	20.6	20.0	106.7	NA	72.0	121.0	101.8	103.0	53.0	149.0	1.2	20.0

Notes and Definitions:

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KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49003	Run Date:	11/6/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_9	SMPL Num:	10-622-06	SMPL DF:	10
Matrix:	Water	BLK FLNM:	9BK00145	SMPL FLNM:	9BR00148	MS DF:	10
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	9BR00149	MSD DF:	10
		LCS FLNM:	9QC00146	MSD FLNM:	9BR00150		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
1,2-dibromoethane	5.0	ND	ND	20.1	NA	20.0	ND	19.3	19.1	20.0	100.4	NA	75.0	121.0	96.6	95.4	60.0	140.0	1.3	20.0
chlorobenzene	5.0	ND	ND	22.1	NA	20.0	ND	19.5	19.7	20.0	110.4	NA	83.0	120.0	97.5	98.3	37.0	160.0	0.8	20.0
1,1,1,2-tetrachloroethane	5.0	ND	ND	21.4	NA	20.0	ND	20.0	20.1	20.0	107.2	NA	79.0	118.0	100.2	100.4	60.0	140.0	0.2	20.0
ethylbenzene	5.0	ND	ND	22.1	NA	20.0	ND	19.4	18.7	20.0	110.3	NA	82.0	119.0	96.9	93.7	37.0	162.0	3.4	20.0
m+p-xylene	5.0	ND	ND	44.0	NA	40.0	ND	39.1	38.0	40.0	109.9	NA	81.0	121.0	97.7	94.9	60.0	140.0	2.9	20.0
o-xylene	5.0	ND	ND	22.1	NA	20.0	ND	20.3	19.6	20.0	110.3	NA	81.0	199.0	101.3	97.9	60.0	140.0	3.5	20.0
styrene	5.0	ND	ND	21.0	NA	20.0	ND	19.8	19.6	20.0	105.0	NA	81.0	118.0	99.0	98.2	60.0	140.0	0.8	20.0
bromoform	5.0	ND	ND	15.9	NA	20.0	ND	15.4	15.5	20.0	79.4	NA	68.0	129.0	77.0	77.5	45.0	169.0	0.7	20.0
isopropylbenzene	5.0	ND	ND	20.9	NA	20.0	ND	19.1	18.2	20.0	104.6	NA	81.0	121.0	95.4	90.8	60.0	140.0	5.0	20.0
1,1,2,2-tetrachloroethane	5.0	ND	ND	19.6	NA	20.0	ND	19.2	20.0	20.0	98.2	NA	61.0	137.0	96.2	99.9	46.0	157.0	3.8	20.0
1,2,3-trichloropropane	5.0	ND	ND	19.1	NA	20.0	ND	18.6	19.5	20.0	95.6	NA	72.0	130.0	93.2	97.4	60.0	140.0	4.4	20.0
trans-1,4-dichloro-2-butene	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	20.0
propyl-benzene	5.0	ND	ND	20.5	NA	20.0	ND	18.8	18.1	20.0	102.7	NA	69.0	135.0	94.1	90.6	60.0	140.0	3.8	20.0
bromobenzene	5.0	ND	ND	20.5	NA	20.0	ND	19.4	19.6	20.0	102.5	NA	86.0	118.0	97.2	97.8	60.0	140.0	0.6	20.0
1,3,5-trimethylbenzene	5.0	ND	ND	20.4	NA	20.0	ND	19.3	18.9	20.0	101.8	NA	83.0	121.0	96.4	94.3	60.0	140.0	2.2	20.0
2-chlorotoluene	5.0	ND	ND	20.2	NA	20.0	ND	19.6	20.6	20.0	100.9	NA	80.0	126.0	98.2	103.1	60.0	140.0	4.9	20.0
4-chlorotoluene	5.0	ND	ND	20.3	NA	20.0	ND	18.3	17.2	20.0	101.7	NA	80.0	125.0	91.6	85.8	60.0	140.0	6.5	20.0
tert-butyl-benzene	5.0	ND	ND	20.7	NA	20.0	ND	19.3	18.5	20.0	103.4	NA	79.0	114.0	96.3	92.3	60.0	140.0	4.3	20.0
1,2,4-trimethylbenzene	5.0	ND	ND	20.5	NA	20.0	ND	19.9	19.7	20.0	102.3	NA	84.0	121.0	99.3	98.5	60.0	140.0	0.8	20.0
sec-butyl-benzene	5.0	ND	ND	20.0	NA	20.0	ND	19.2	17.4	20.0	100.0	NA	81.0	122.0	91.1	87.0	60.0	140.0	4.5	20.0

Notes and Definitions:

RDL = Reporting Detection Limit
BLK = Method Blank
BLK2 = Second Method Blank
LCS = Laboratory Control Sample
LCS2 = Second Laboratory Control Sample
SMPL = Sample Results
MS/MSD = Matrix Spike / Matrix Spike Duplicate
LCL = Lower Control Limit
UCL = Upper Control Limit
RPD = Relative Percent Difference

ND = Not Detected
NA = Not Applicable

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49003	Run Date:	11/6/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_9	SMPL Num:	10-622-06	SMPL DF:	10
Matrix:	Water	BLK FLNM:	9BK00145	SMPL FLNM:	9BR00148	MS DF:	10
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	9BR00149	MSD DF:	10
		LCS FLNM:	9QC00146	MSD FLNM:	9BR00150		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
	RDL	BLK	BLK2	LCS	LCS2	LCS Spike Level	SMPL	MS	MSD	MS Spike Level	LCS	LCS2	LCS LCL	LCS UCL	MS	MSD	MS LCL	MS UCL	MS RPD	RPD UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
p-isopropyl-toluene	5.0	ND	ND	19.7	NA	20.0	ND	18.2	17.5	20.0	98.6	NA	80.0	119.0	91.0	87.3	60.0	140.0	4.1	20.0
1,3-dichlorobenzene	5.0	ND	ND	20.2	NA	20.0	ND	19.3	19.3	20.0	100.9	NA	85.0	119.0	96.7	96.3	60.0	140.0	0.4	20.0
1,4-dichlorobenzene	5.0	ND	ND	19.9	NA	20.0	ND	19.0	18.7	20.0	99.3	NA	82.0	122.0	94.9	93.7	18.0	190.0	1.3	20.0
n-butyl-benzene	5.0	ND	ND	20.5	NA	20.0	ND	18.5	17.8	20.0	102.5	NA	80.0	125.0	92.7	88.8	60.0	140.0	4.3	20.0
1,2-dichlorobenzene	5.0	ND	ND	20.8	NA	20.0	ND	19.5	19.7	20.0	104.2	NA	86.0	119.0	97.5	98.5	19.0	190.0	1.0	20.0
1,2-dibromo-3-chloropropane	5.0	ND	ND	16.0	NA	20.0	ND	16.5	16.4	20.0	80.2	NA	66.0	134.0	82.3	81.8	60.0	140.0	0.6	20.0
1,2,4-trichlorobenzene	5.0	ND	ND	19.5	NA	20.0	ND	18.7	18.9	20.0	97.4	NA	78.0	122.0	93.6	94.3	60.0	140.0	0.7	20.0
hexachlorobutadiene	5.0	ND	ND	19.1	NA	20.0	ND	17.2	16.8	20.0	95.5	NA	73.0	125.0	86.2	84.2	60.0	140.0	2.4	20.0
napthalene	10.0	ND	ND	18.7	NA	20.0	ND	20.1	18.5	20.0	93.4	NA	74.0	148.0	100.3	92.3	60.0	140.0	8.3	20.0
1,2,3-trichlorobenzene	5.0	ND	ND	19.3	NA	20.0	ND	19.3	19.5	20.0	96.3	NA	74.0	124.0	96.6	97.6	60.0	140.0	1.1	20.0

BLK2 = Second Method Blank
LCS = Laboratory Control Sample
LCS2 = Second Laboratory Control Sample
SMPL = Sample Results
MS/MSD = Matrix Spike / Matrix Spike Duplicate
LCL = Lower Control Limit
UCL = Upper Control Limit
RPD = Relative Percent Difference

ND = Not Detected
NA = Not Applicable
RDL = Reporting Detection Limit
BLK = Method Blank

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49008	Run Date:	11/6/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_6	SMPL Num:	10-586-13	SMPL DF:	1
Matrix:	Soil	BLK FLNM:	6BK11248	SMPL FLNM:	6LA11250	MS DF:	1
Units:	ug/kg	BLK2 FLNM:	NA	MS FLNM:	6LA11251.D	MSD DF:	1
		LCS FLNM:	6QC11249.D	MSD FLNM:	6LA11252.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	%	%	%	%	%	%	%	%	%	%
dichlorodifluoromethane	10.0	ND	ND	19.5	NA	20.0	ND	19.3	18.6	20.0	97.3	NA	46.0	152.0	96.3	93.1	46.0	152.0	3.4	20.0
chloromethane	10.0	ND	ND	19.0	NA	20.0	ND	18.7	17.8	20.0	95.1	NA	64.0	140.0	93.7	89.1	64.0	140.0	5.0	20.0
vinyl chloride	10.0	ND	ND	20.9	NA	20.0	ND	21.5	20.1	20.0	104.7	NA	70.0	137.0	107.6	100.6	70.0	137.0	6.7	20.0
bromomethane	10.0	ND	ND	23.6	NA	20.0	ND	22.4	21.4	20.0	118.1	NA	62.0	147.0	111.9	107.2	62.0	147.0	4.3	20.0
chloroethane	10.0	ND	ND	22.0	NA	20.0	ND	22.1	21.0	20.0	110.1	NA	69.0	136.0	110.5	104.8	69.0	136.0	5.3	20.0
trichlorofluoromethane	10.0	ND	ND	22.1	NA	20.0	ND	21.9	20.8	20.0	110.5	NA	70.0	134.0	109.5	103.8	70.0	134.0	5.3	20.0
freon 113	10.0	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	20.0
acetone	100.0	ND	ND	23.1	NA	20.0	ND	20.1	20.9	20.0	115.4	NA	14.0	171.0	100.5	104.5	14.0	171.0	3.9	20.0
1,1-dichloroethene	5.0	ND	ND	21.5	NA	20.0	ND	21.2	20.6	20.0	107.7	NA	70.0	140.0	105.9	103.0	70.0	140.0	2.7	20.0
iodomethane	10.0	ND	ND	18.1	NA	20.0	ND	17.8	18.5	20.0	90.4	NA	50.0	150.0	89.2	92.5	50.0	150.0	3.6	20.0
methylene chloride	5.0	ND	ND	21.1	NA	20.0	ND	20.8	20.9	20.0	105.6	NA	57.0	146.0	103.9	104.4	57.0	146.0	0.4	20.0
carbon disulfide	5.0	ND	ND	22.1	NA	20.0	ND	20.7	20.3	20.0	110.6	NA	69.0	125.0	103.7	101.7	69.0	125.0	1.9	20.0
acrylonitrile	100.0	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	20.0
trans-1,2-dichloroethene	5.0	ND	ND	22.8	NA	20.0	ND	22.1	21.4	20.0	114.0	NA	75.0	141.0	110.3	106.8	75.0	141.0	3.2	20.0
vinyl acetate	10.0	ND	ND	24.9	NA	20.0	ND	17.9	18.5	20.0	124.5	NA	D	132.0	89.6	92.5	D	132.0	3.2	20.0
1,1-dichloroethane	5.0	ND	ND	22.1	NA	20.0	ND	21.4	20.7	20.0	110.6	NA	79.0	125.0	107.1	103.7	79.0	125.0	3.2	20.0
2-butanone	100.0	ND	ND	21.2	NA	20.0	ND	17.3	18.2	20.0	106.2	NA	28.0	173.0	86.3	91.0	28.0	173.0	5.4	20.0
2,2-dichloropropane	5.0	ND	ND	21.1	NA	20.0	ND	20.6	19.9	20.0	105.7	NA	69.0	128.0	103.1	99.5	69.0	128.0	3.5	20.0
cis-1,2-dichloroethene	5.0	ND	ND	21.2	NA	20.0	ND	20.2	20.1	20.0	105.9	NA	75.0	125.0	100.9	100.3	75.0	125.0	0.6	20.0
chloroform	5.0	ND	ND	21.7	NA	20.0	ND	21.1	20.4	20.0	108.5	NA	78.0	124.0	105.3	101.9	78.0	124.0	3.3	20.0

Notes and Definitions:

RDL= Reporting Detection Limit
BLK= Method Blank
BLK2= Second Method Blank
LCS= Laboratory Control Sample
LCS2= Second Laboratory Control Sample
SMPL= Sample Results
MS/MSD= Matrix Spike / Matrix Spike Duplicate
LCL= Lower Control Limit
UCL= Upper Control Limit
RPD= Relative Percent Difference

ND= Not Detected
NA= Not Applicable

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49008	Run Date:	11/6/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_6	SMPL Num:	10-586-13	SMPL DF:	1
Matrix:	Soil	BLK FLNM:	6BK11248	SMPL FLNM:	6LA11250	MS DF:	1
Units:	ug/kg	BLK2 FLNM:	NA	MS FLNM:	6LA11251.D	MSD DF:	1
		LCS FLNM:	6QC11249.D	MSD FLNM:	6LA11252.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	%	%	%	%	%	%	%	%	%	%
bromochloromethane	5.0	ND	ND	21.7	NA	20.0	ND	20.3	19.8	20.0	108.3	NA	78.0	125.0	101.3	98.8	78.0	125.0	2.4	20.0
1,1,1-trichloroethane	5.0	ND	ND	21.3	NA	20.0	ND	21.0	20.2	20.0	106.3	NA	77.0	124.0	104.9	100.8	77.0	124.0	4.0	20.0
1,1-dichloropropene	5.0	ND	ND	22.7	NA	20.0	ND	22.2	21.2	20.0	113.5	NA	85.0	132.0	110.9	106.1	85.0	132.0	4.4	20.0
carbon tetrachloride	5.0	ND	ND	22.0	NA	20.0	ND	21.5	20.7	20.0	109.8	NA	77.0	126.0	107.6	103.4	77.0	126.0	4.0	20.0
1,2-dichloroethane	5.0	ND	ND	21.5	NA	20.0	ND	20.0	19.8	20.0	107.3	NA	75.0	126.0	99.9	98.8	75.0	126.0	1.2	20.0
benzene	5.0	ND	ND	22.1	NA	20.0	ND	21.0	20.3	20.0	110.8	NA	81.0	122.0	104.8	101.4	81.0	122.0	3.3	20.0
trichloroethene	5.0	ND	ND	21.7	NA	20.0	ND	21.0	20.4	20.0	108.7	NA	81.0	123.0	105.2	101.8	81.0	123.0	3.2	20.0
1,2-dichloropropane	5.0	ND	ND	21.1	NA	20.0	ND	20.1	19.7	20.0	105.3	NA	79.0	125.0	100.7	98.4	79.0	125.0	2.3	20.0
bromodichloromethane	5.0	ND	ND	21.9	NA	20.0	ND	20.9	20.5	20.0	109.5	NA	81.0	123.0	104.5	102.5	81.0	123.0	1.9	20.0
dibromomethane	5.0	ND	ND	21.6	NA	20.0	ND	19.8	19.5	20.0	107.8	NA	80.0	126.0	99.1	97.6	80.0	126.0	1.6	20.0
2-chloroethylvinyl-ether	5.0	ND	ND	40.9	NA	20.0	ND	31.9	33.3	20.0	204.3	NA	50.0	151.0	159.3	166.7	50.0	151.0	4.6	20.0
4-methyl-2-pentanone	10.0	ND	ND	18.1	NA	20.0	ND	15.7	15.7	20.0	90.7	NA	38.0	162.0	78.4	78.4	38.0	162.0	0.0	20.0
cis-1,3-dichloropropene	5.0	ND	ND	22.3	NA	20.0	ND	20.8	20.6	20.0	111.4	NA	81.0	124.0	104.2	102.8	81.0	124.0	1.4	20.0
toluene	5.0	ND	ND	22.6	NA	20.0	ND	21.3	20.5	20.0	112.9	NA	80.0	124.0	106.6	102.7	80.0	124.0	3.7	20.0
trans-1,3-dichloropropene	5.0	ND	ND	21.1	NA	20.0	ND	19.6	19.3	20.0	105.7	NA	80.0	122.0	97.9	96.3	80.0	122.0	1.6	20.0
1,1,2-trichloroethane	5.0	ND	ND	21.5	NA	20.0	ND	19.8	19.4	20.0	107.6	NA	79.0	123.0	99.0	97.0	79.0	123.0	2.0	20.0
2-hexanone	10.0	ND	ND	16.7	NA	20.0	ND	14.5	14.6	20.0	83.5	NA	31.0	149.0	72.3	73.2	31.0	149.0	1.2	20.0
1,3-dichloropropane	5.0	ND	ND	21.7	NA	20.0	ND	19.8	19.8	20.0	108.4	NA	79.0	123.0	98.9	99.0	79.0	123.0	0.1	20.0
tetrachloroethene	5.0	ND	ND	21.6	NA	20.0	ND	21.0	20.1	20.0	108.0	NA	80.0	122.0	104.8	100.4	80.0	122.0	4.3	20.0
dibromochloromethane	5.0	ND	ND	21.5	NA	20.0	ND	20.0	20.0	20.0	107.3	NA	81.0	122.0	100.1	100.1	81.0	122.0	0.0	20.0

Notes and Definitions:

RDL= Reporting Detection Limit
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ND= Not Detected
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KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49008	Run Date:	11/6/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_6	SMPL Num:	10-586-13	SMPL DF:	1
Matrix:	Soil	BLK FLNM:	6BK11248	SMPL FLNM:	6LA11250	MS DF:	1
Units:	ug/kg	BLK2 FLNM:	NA	MS FLNM:	6LA11251.D	MSD DF:	1
		LCS FLNM:	6QC11249.D	MSD FLNM:	6LA11252.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	%	%	%	%	%	%	%	%	%	%
1,2-dibromoethane	5.0	ND	ND	21.4	NA	20.0	ND	19.5	19.5	20.0	107.2	NA	79.0	125.0	97.4	97.7	79.0	125.0	0.3	20.0
chlorobenzene	5.0	ND	ND	21.1	NA	20.0	ND	20.3	19.7	20.0	105.7	NA	82.0	124.0	101.7	98.7	82.0	124.0	3.0	20.0
1,1,1,2-tetrachloroethane	5.0	ND	ND	21.5	NA	20.0	ND	20.6	20.2	20.0	107.3	NA	80.0	124.0	102.8	101.1	80.0	124.0	1.7	20.0
ethylbenzene	5.0	ND	ND	21.7	NA	20.0	ND	21.2	20.2	20.0	108.7	NA	78.0	127.0	106.0	100.9	78.0	127.0	4.9	20.0
m+p-xylene	5.0	ND	ND	43.3	NA	40.0	ND	41.9	40.4	40.0	108.2	NA	81.0	124.0	104.7	101.1	81.0	124.0	3.5	20.0
o-xylene	5.0	ND	ND	21.8	NA	20.0	ND	21.1	20.5	20.0	108.9	NA	83.0	124.0	105.5	102.7	83.0	124.0	2.6	20.0
styrene	5.0	ND	ND	21.6	NA	20.0	ND	20.9	20.3	20.0	108.2	NA	80.0	122.0	104.6	101.6	80.0	122.0	2.9	20.0
bromoform	5.0	ND	ND	20.0	NA	20.0	ND	18.1	18.0	20.0	99.9	NA	67.0	134.0	90.3	89.9	67.0	134.0	0.4	20.0
isopropylbenzene	5.0	ND	ND	21.5	NA	20.0	ND	21.3	20.4	20.0	107.7	NA	82.0	124.0	106.6	102.1	82.0	124.0	4.3	20.0
1,1,2,2-tetrachloroethane	5.0	ND	ND	21.5	NA	20.0	ND	19.1	19.0	20.0	107.5	NA	71.0	136.0	95.7	95.1	71.0	136.0	0.6	20.0
1,2,3-trichloropropane	5.0	ND	ND	21.5	NA	20.0	ND	19.1	19.2	20.0	107.7	NA	70.0	139.0	95.4	96.1	70.0	139.0	0.8	20.0
trans-1,4-dichloro-2-butene	5.0	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
propyl-benzene	5.0	ND	ND	21.0	NA	20.0	ND	20.5	19.7	20.0	104.9	NA	79.0	124.0	102.6	98.6	79.0	124.0	4.0	20.0
bromobenzene	5.0	ND	ND	21.1	NA	20.0	ND	20.0	19.5	20.0	105.5	NA	80.0	122.0	99.9	97.6	80.0	122.0	2.3	20.0
1,3,5-trimethylbenzene	5.0	ND	ND	21.4	NA	20.0	ND	20.8	20.3	20.0	107.1	NA	82.0	123.0	104.2	101.3	82.0	123.0	2.9	20.0
2-chlorotoluene	5.0	ND	ND	21.0	NA	20.0	ND	20.2	19.9	20.0	105.0	NA	77.0	126.0	101.1	99.6	77.0	126.0	1.5	20.0
4-chlorotoluene	5.0	ND	ND	21.8	NA	20.0	ND	21.0	20.0	20.0	109.2	NA	80.0	124.0	105.0	99.9	80.0	124.0	4.9	20.0
tert-butyl-benzene	5.0	ND	ND	20.3	NA	20.0	ND	19.9	19.3	20.0	101.7	NA	78.0	122.0	99.7	96.4	78.0	122.0	3.3	20.0
1,2,4-trimethylbenzene	5.0	ND	ND	21.2	NA	20.0	ND	20.5	19.7	20.0	106.1	NA	83.0	123.0	102.6	98.4	83.0	123.0	4.2	20.0
sec-butyl-benzene	5.0	ND	ND	21.0	NA	20.0	ND	20.7	19.9	20.0	104.9	NA	80.0	124.0	103.5	99.5	80.0	124.0	3.9	20.0

Notes and Definitions:

RDL= Reporting Detection Limit
ND= Not Detected
BLK= Method Blank
NA= Not Applicable
BLK2= *Second Method Blank*
LCS= Laboratory Control Sample
LCS2= Second Laboratory Control Sample
SMPL= Sample Results
MS/MSD= Matrix Spike / Matrix Spike Duplicate
LCL= Lower Control Limit
UCL= Upper Control Limit
RPD= Relative Percent Difference

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49008	Run Date:	11/6/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_6	SMPL Num:	10-586-13	SMPL DF:	1
Matrix:	Soil	BLK FLNM:	6BK11248	SMPL FLNM:	6LA11250	MS DF:	1
Units:	ug/kg	BLK2 FLNM:	NA	MS FLNM:	6LA11251.D	MSD DF:	1
		LCS FLNM:	6QC11249.D	MSD FLNM:	6LA11252.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	%	%	%	%	%	%	%	%	%	%
p-isopropyl-toluene	5.0	ND	ND	20.4	NA	20.0	ND	20.0	19.2	20.0	101.8	NA	77.0	124.0	100.1	96.0	77.0	124.0	4.2	20.0
1,3-dichlorobenzene	5.0	ND	ND	20.8	NA	20.0	ND	19.8	19.2	20.0	103.8	NA	82.0	120.0	99.0	96.1	82.0	120.0	3.0	20.0
1,4-dichlorobenzene	5.0	ND	ND	20.4	NA	20.0	ND	19.3	18.7	20.0	102.0	NA	81.0	121.0	96.6	93.4	81.0	121.0	3.3	20.0
n-butyl-benzene	5.0	ND	ND	21.0	NA	20.0	ND	20.5	19.5	20.0	105.1	NA	81.0	125.0	102.6	97.4	81.0	125.0	5.2	20.0
1,2-dichlorobenzene	5.0	ND	ND	21.2	NA	20.0	ND	19.8	19.5	20.0	106.1	NA	84.0	122.0	98.9	97.6	84.0	122.0	1.3	20.0
,2-dibromo-3-chloropropan	5.0	ND	ND	19.5	NA	20.0	ND	16.8	17.0	20.0	97.7	NA	55.0	155.0	84.2	84.8	55.0	155.0	0.8	20.0
1,2,4-trichlorobenzene	5.0	ND	ND	20.3	NA	20.0	ND	18.9	18.0	20.0	101.4	NA	78.0	124.0	94.6	90.1	78.0	124.0	4.9	20.0
hexachlorobutadiene	5.0	ND	ND	20.9	NA	20.0	ND	20.4	19.8	20.0	104.4	NA	73.0	127.0	102.1	98.9	73.0	127.0	3.2	20.0
napthalene	10.0	ND	ND	20.2	NA	20.0	ND	17.9	18.2	20.0	100.9	NA	56.0	152.0	89.6	91.0	56.0	152.0	1.6	20.0
1,2,3-trichlorobenzene	5.0	ND	ND	20.4	NA	20.0	ND	18.8	18.3	20.0	102.2	NA	76.0	128.0	94.0	91.7	76.0	128.0	2.4	20.0

BLK2= Second Method Blank
LCS= Laboratory Control Sample
LCS2= Second Laboratory Control Sample
SMPL= Sample Results
MS/MSD= Matrix Spike / Matrix Spike Duplicate
LCL= Lower Control Limit
UCL= Upper Control Limit
RPD= Relative Percent Difference

ND= Not Detected
NA= Not Applicable
RDL= Reporting Detection Limit
BLK= Method Blank

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49020	Run Date:	11/7/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_2	SMPL Num:	10-621-01	SMPL DF:	10
Matrix:	Water	BLK FLNM:	2BK27430	SMPL FLNM:	2BR27434	MS DF:	10
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	2BR27435.D	MSD DF:	10
		LCS FLNM:	2QC27431.D	MSD FLNM:	2BR27436.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
	RDL	BLK	BLK2	LCS	LCS2	LCS Spike Level	SMPL	MS	MSD	MS Spike Level	LCS	LCS2	LCS LCL	LCS UCL	MS	MSD	MS LCL	MS UCL	MS RPD	RPD UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
dichlorodifluoromethane	10.0	ND	ND	17.1	NA	20.0	ND	16.6	15.5	20.0	85.6	NA	38.0	148.0	83.0	77.3	60.0	140.0	7.1	20.0
chloromethane	10.0	ND	ND	15.8	NA	20.0	ND	15.6	14.9	20.0	78.8	NA	56.0	132.0	77.8	74.3	D	273.0	4.5	20.0
vinyl chloride	10.0	ND	ND	17.1	NA	20.0	ND	15.4	15.1	20.0	85.3	NA	68.0	126.0	76.8	75.6	D	251.0	1.6	20.0
bromomethane	10.0	ND	ND	21.6	NA	20.0	ND	20.2	20.6	20.0	107.8	NA	55.0	138.0	100.8	102.8	D	242.0	2.0	20.0
chloroethane	10.0	ND	ND	19.2	NA	20.0	ND	17.4	17.2	20.0	96.0	NA	70.0	128.0	86.9	86.0	14.0	230.0	1.1	20.0
trichlorofluoromethane	10.0	ND	ND	19.8	NA	20.0	ND	18.5	17.4	20.0	99.1	NA	70.0	127.0	92.5	87.1	17.0	181.0	6.0	20.0
freon 113	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	70.0	130.0	NA	20.0
acetone	100.0	ND	ND	9.9	NA	20.0	ND	17.4	19.3	20.0	49.6	NA	44.0	114.0	87.2	96.5	70.0	130.0	10.1	20.0
1,1-dichloroethene	5.0	ND	ND	19.0	NA	20.0	ND	18.1	17.4	20.0	94.8	NA	69.0	144.0	90.5	87.2	D	234.0	3.7	20.0
iodomethane	NTC	ND	ND	21.4	NA	20.0	ND	19.3	18.1	20.0	107.1	NA	NA	NA	96.3	90.7	70.0	130.0	6.0	20.0
methylene chloride	5.0	ND	ND	18.4	NA	20.0	ND	17.5	17.4	20.0	92.1	NA	71.0	128.0	87.7	87.2	D	221.0	0.6	20.0
carbon disulfide	5.0	ND	ND	21.9	NA	20.0	ND	22.0	21.6	20.0	109.6	NA	67.0	136.0	109.8	107.9	70.0	130.0	1.7	20.0
acrylonitrile	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	70.0	130.0	NA	20.0
trans-1,2-dichloroethene	5.0	ND	ND	22.6	NA	20.0	ND	22.1	21.4	20.0	112.9	NA	85.0	133.0	110.4	107.1	54.0	156.0	3.0	20.0
vinyl acetate	10.0	ND	ND	20.7	NA	20.0	ND	0.7	0.0	20.0	103.6	NA	9.0	236.0	3.6	0.0	9.0	236.0	200.0	20.0
1,1-dichloroethane	5.0	ND	ND	21.5	NA	20.0	ND	22.0	20.8	20.0	107.6	NA	82.0	124.0	109.8	104.0	59.0	155.0	5.4	20.0
2-butanone	100.0	ND	ND	15.9	NA	20.0	ND	18.7	18.9	20.0	79.5	NA	43.0	140.0	93.4	94.5	70.0	130.0	1.1	20.0
2,2-dichloropropane	5.0	ND	ND	20.3	NA	20.0	ND	19.9	19.2	20.0	101.5	NA	77.0	126.0	99.7	96.1	60.0	140.0	3.6	20.0
cis-1,2-dichloroethene	5.0	ND	ND	20.2	NA	20.0	ND	20.0	19.4	20.0	100.9	NA	69.0	130.0	99.9	96.9	60.0	140.0	3.1	20.0
chloroform	5.0	ND	ND	20.6	NA	20.0	ND	20.5	20.0	20.0	103.1	NA	83.0	121.0	102.7	100.0	51.0	138.0	2.7	20.0

Notes and Definitions:

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MS/MSD = Matrix Spike / Matrix Spike Duplicate
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KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49020	Run Date:	11/7/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_2	SMPL Num:	10-621-01	SMPL DF:	10
Matrix:	Water	BLK FLNM:	2BK27430	SMPL FLNM:	2BR27434	MS DF:	10
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	2BR27435.D	MSD DF:	10
		LCS FLNM:	2QC27431.D	MSD FLNM:	2BR27436.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
bromochloromethane	5.0	ND	ND	20.8	NA	20.0	ND	20.1	19.7	20.0	104.0	NA	85.0	118.0	100.4	98.5	60.0	140.0	2.0	20.0
1,1,1-trichloroethane	5.0	ND	ND	20.3	NA	20.0	ND	20.5	19.6	20.0	101.7	NA	74.0	125.0	102.5	98.1	52.0	162.0	4.3	20.0
1,1-dichloropropene	5.0	ND	ND	23.0	NA	20.0	ND	23.2	22.1	20.0	115.0	NA	85.0	126.0	115.8	110.7	60.0	140.0	4.5	20.0
carbon tetrachloride	5.0	ND	ND	20.4	NA	20.0	ND	20.3	19.5	20.0	102.0	NA	73.0	129.0	101.3	97.4	70.0	140.0	3.9	20.0
1,2-dichloroethane	5.0	ND	ND	20.8	NA	20.0	ND	21.8	21.4	20.0	103.9	NA	76.0	123.0	109.2	106.9	49.0	155.0	2.1	20.0
benzene	5.0	ND	ND	21.2	NA	20.0	ND	21.4	20.9	20.0	106.0	NA	86.0	119.0	107.2	104.3	37.0	151.0	2.7	20.0
trichloroethene	5.0	ND	ND	20.5	NA	20.0	ND	29.0	32.3	20.0	102.7	NA	82.0	120.0	145.0	161.5	71.0	157.0	10.7	20.0
1,2-dichloropropane	5.0	ND	ND	20.9	NA	20.0	ND	22.0	22.1	20.0	104.5	NA	74.0	126.0	110.1	110.4	D	210.0	0.3	20.0
bromodichloromethane	5.0	ND	ND	19.7	NA	20.0	ND	19.9	20.5	20.0	98.6	NA	74.0	126.0	99.6	102.6	35.0	155.0	2.9	20.0
dibromomethane	5.0	ND	ND	20.7	NA	20.0	ND	21.7	21.7	20.0	103.3	NA	78.0	125.0	108.3	108.5	60.0	140.0	0.2	20.0
2-chloroethylvinyl-ether	10.0	ND	ND	19.7	NA	20.0	ND	22.5	23.0	20.0	98.5	NA	68.0	144.0	112.6	115.0	70.0	130.0	2.1	20.0
4-methyl-2-pentanone	10.0	ND	ND	18.1	NA	20.0	ND	21.5	23.6	20.0	90.3	NA	70.0	127.0	107.6	118.0	70.0	130.0	9.2	20.0
cis-1,3-dichloropropene	5.0	ND	ND	21.3	NA	20.0	ND	21.8	21.4	20.0	106.3	NA	77.0	123.0	109.2	106.9	D	227.0	2.1	20.0
toluene	5.0	ND	ND	20.1	NA	20.0	ND	21.1	20.1	20.0	100.4	NA	83.0	119.0	105.4	100.3	47.0	150.0	5.0	20.0
trans-1,3-dichloropropene	5.0	ND	ND	20.6	NA	20.0	ND	21.5	21.4	20.0	102.8	NA	74.0	124.0	107.7	106.8	17.0	183.0	0.8	20.0
1,1,2-trichloroethane	5.0	ND	ND	19.7	NA	20.0	ND	21.1	21.3	20.0	98.4	NA	72.0	119.0	105.7	106.3	52.0	150.0	0.6	20.0
2-hexanone	10.0	ND	ND	18.5	NA	20.0	ND	23.6	24.2	20.0	92.3	NA	55.0	114.0	118.1	121.1	70.0	130.0	2.5	20.0
1,3-dichloropropane	5.0	ND	ND	20.6	NA	20.0	ND	21.8	21.4	20.0	103.2	NA	73.0	122.0	108.8	107.0	60.0	140.0	1.7	20.0
tetrachloroethene	5.0	ND	ND	20.1	NA	20.0	ND	20.5	19.4	20.0	100.7	NA	82.0	120.0	102.3	97.1	64.0	148.0	5.2	20.0
dibromochloromethane	5.0	ND	ND	19.6	NA	20.0	ND	20.3	20.4	20.0	98.0	NA	72.0	121.0	101.4	102.0	53.0	149.0	0.6	20.0

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KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49020	Run Date:	11/7/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_2	SMPL Num:	10-621-01	SMPL DF:	10
Matrix:	Water	BLK FLNM:	2BK27430	SMPL FLNM:	2BR27434	MS DF:	10
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	2BR27435.D	MSD DF:	10
		LCS FLNM:	2QC27431.D	MSD FLNM:	2BR27436.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
	RDL	BLK	BLK2	LCS	LCS2	LCS Spike Level	SMPL	MS	MSD	MS Spike Level	LCS	LCS2	LCS LCL	LCS UCL	MS	MSD	MS LCL	MS UCL	MS RPD	RPD UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
1,2-dibromoethane	5.0	ND	ND	20.0	NA	20.0	ND	21.4	21.4	20.0	100.2	NA	75.0	121.0	107.1	107.2	60.0	140.0	0.1	20.0
chlorobenzene	5.0	ND	ND	20.6	NA	20.0	ND	20.9	20.8	20.0	102.9	NA	83.0	120.0	104.5	103.8	37.0	160.0	0.7	20.0
1,1,1,2-tetrachloroethane	5.0	ND	ND	19.8	NA	20.0	ND	20.7	20.3	20.0	99.1	NA	79.0	118.0	103.3	101.4	60.0	140.0	1.9	20.0
ethylbenzene	5.0	ND	ND	20.6	NA	20.0	ND	21.4	20.4	20.0	103.1	NA	82.0	119.0	107.1	101.8	37.0	162.0	5.1	20.0
m+p-xylene	5.0	ND	ND	40.3	NA	40.0	ND	41.1	40.0	40.0	100.6	NA	81.0	121.0	102.8	100.1	60.0	140.0	2.7	20.0
o-xylene	5.0	ND	ND	20.4	NA	20.0	ND	20.7	20.0	20.0	101.8	NA	81.0	199.0	103.3	99.8	60.0	140.0	3.4	20.0
styrene	5.0	ND	ND	20.5	NA	20.0	ND	21.1	20.8	20.0	102.7	NA	81.0	118.0	105.5	104.0	60.0	140.0	1.4	20.0
bromoform	5.0	ND	ND	17.5	NA	20.0	ND	18.6	19.0	20.0	87.4	NA	68.0	128.0	92.9	95.0	45.0	169.0	2.2	20.0
isopropylbenzene	5.0	ND	ND	20.3	NA	20.0	ND	20.8	19.9	20.0	101.4	NA	81.0	121.0	104.0	99.6	60.0	140.0	4.3	20.0
1,1,2,2-tetrachloroethane	5.0	ND	ND	19.3	NA	20.0	ND	10.5	5.2	20.0	96.7	NA	61.0	137.0	52.7	26.1	46.0	157.0	67.6	20.0
1,2,3-trichloropropane	5.0	ND	ND	19.2	NA	20.0	ND	21.8	22.2	20.0	96.0	NA	72.0	130.0	109.1	111.0	60.0	140.0	1.7	20.0
trans-1,4-dichloro-2-butene	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	20.0
propyl-benzene	5.0	ND	ND	21.0	NA	20.0	ND	22.0	21.5	20.0	104.9	NA	69.0	135.0	110.2	107.4	60.0	140.0	2.5	20.0
bromobenzene	5.0	ND	ND	19.8	NA	20.0	ND	21.1	20.7	20.0	99.2	NA	86.0	116.0	105.5	103.3	60.0	140.0	2.1	20.0
1,3,5-trimethylbenzene	5.0	ND	ND	20.4	NA	20.0	ND	21.6	21.4	20.0	101.9	NA	83.0	121.0	108.2	106.8	60.0	140.0	1.3	20.0
2-chlorotoluene	5.0	ND	ND	19.5	NA	20.0	ND	21.6	23.1	20.0	97.5	NA	80.0	126.0	107.8	115.4	60.0	140.0	6.8	20.0
4-chlorotoluene	5.0	ND	ND	20.8	NA	20.0	ND	22.1	20.6	20.0	104.2	NA	80.0	125.0	110.3	103.2	60.0	140.0	6.7	20.0
tert-butyl-benzene	5.0	ND	ND	20.9	NA	20.0	ND	22.0	21.4	20.0	104.7	NA	79.0	114.0	110.0	107.1	60.0	140.0	2.7	20.0
1,2,4-trimethylbenzene	5.0	ND	ND	20.6	NA	20.0	ND	22.1	21.6	20.0	103.0	NA	84.0	121.0	110.6	108.1	60.0	140.0	2.3	20.0
sec-butyl-benzene	5.0	ND	ND	21.2	NA	20.0	ND	21.6	21.7	20.0	105.9	NA	81.0	122.0	108.0	108.4	60.0	140.0	0.4	20.0

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KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49020	Run Date:	11/7/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_2	SMPL Num:	10-621-01	SMPL DF:	10
Matrix:	Water	BLK FLNM:	2BK27430	SMPL FLNM:	2BR27434	MS DF:	10
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	2BR27435.D	MSD DF:	10
		LCS FLNM:	2QC27431.D	MSD FLNM:	2BR27436.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
p-isopropyl-toluene	5.0	ND	ND	20.5	NA	20.0	ND	21.5	21.1	20.0	102.5	NA	80.0	119.0	107.7	105.3	60.0	140.0	2.3	20.0
1,3-dichlorobenzene	5.0	ND	ND	20.2	NA	20.0	ND	20.9	21.1	20.0	100.8	NA	85.0	119.0	104.6	105.4	60.0	140.0	0.8	20.0
1,4-dichlorobenzene	5.0	ND	ND	19.9	NA	20.0	ND	20.6	20.9	20.0	99.4	NA	82.0	122.0	103.6	104.5	18.0	190.0	0.7	20.0
n-butyl-benzene	5.0	ND	ND	21.9	NA	20.0	ND	22.9	22.5	20.0	109.3	NA	80.0	125.0	114.7	112.3	60.0	140.0	2.1	20.0
1,2-dichlorobenzene	5.0	ND	ND	20.2	NA	20.0	ND	21.3	21.4	20.0	100.9	NA	86.0	119.0	106.4	107.0	19.0	190.0	0.6	20.0
1,2-dibromo-3-chloropropane	5.0	ND	ND	18.4	NA	20.0	ND	20.7	21.8	20.0	92.1	NA	66.0	134.0	103.6	108.8	60.0	140.0	4.9	20.0
1,2,4-trichlorobenzene	5.0	ND	ND	19.6	NA	20.0	ND	21.0	21.0	20.0	98.2	NA	78.0	122.0	105.0	104.8	60.0	140.0	0.1	20.0
hexachlorobutadiene	5.0	ND	ND	17.8	NA	20.0	ND	17.9	17.9	20.0	88.9	NA	73.0	125.0	89.4	89.6	60.0	140.0	0.3	20.0
napthalene	10.0	ND	ND	19.8	NA	20.0	ND	22.0	22.7	20.0	99.0	NA	74.0	148.0	110.1	113.7	60.0	140.0	3.2	20.0
1,2,3-trichlorobenzene	5.0	ND	ND	19.2	NA	20.0	ND	20.8	21.1	20.0	96.0	NA	74.0	124.0	104.0	105.4	60.0	140.0	1.3	20.0

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KEMRON ENVIRONMENTAL SERVICES , OVL
SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP : WG49078 | EXT DATE : 11/7/98 | RUN DATE : 11/9/98 | INSTRUMENT : HPMS3
METHOD : 8270 | BENCH SHEET : V104P48 | SMPL ID : 11-011-14 | ANALYST : mdc
MATRIX : WATER | BLK FLNM : 14968.D | SMPL FLNM : 15001.D
CONCENTRATION UNITS : UG/L | LCS FLNM: 14969.D | MS FLNM : 15002.D
PREP WORK GRP : WG48815 | MSD FLNM : 15003.D

ANALYTE	RDL	CONCENTRATION , ug / L							PERCENT RECOVERY , %									PERCENT			BEYOND LIMITS				
		BLANK	LCS SPIKE ADDED	LCS	SAMPLE	MS SPIKE ADDED	MS	MSD	BLANK	LCS	LCS LCL	LCS UCL	SAMPLE	MS	MSD	MS LCL	MS UCL	DUP RPD	MSD RPD	RPD UCL	SAMPLE	BLANK	LCS	MS	MSD
PYRIDINE	5.0	ND	100	16.8	ND	200	54.9	53.6	NA	16.8	5	150	NA	27.4	26.8	5	150	NA	2	40					
N-NITROSODIMETHYLAMINE	5.0	ND	100	36.4	ND	200	81.0	90.8	NA	36.4	5	150	NA	40.5	45.4	5	150	NA	11	40					
ANILINE	10.0	ND	100	28.9	ND	200	82.6	94.2	NA	28.9	5	150	NA	41.3	47.1	5	150	NA	13	40					
PHENOL	5.0	ND	100	25.9	ND	200	54.8	60.8	NA	25.9	5	112	NA	27.4	30.4	5	112	NA	10	40					
BIS(2-CHLOROETHYL)ETHER	5.0	ND	100	63.6	ND	200	117.6	131.3	NA	63.6	12	158	NA	58.8	65.6	12	158	NA	11	40					
2-CHLOROPHENOL	5.0	ND	100	57.8	ND	200	112.6	128.5	NA	57.8	23	134	NA	56.3	64.3	23	134	NA	13	40					
1,3-DICHLOROBENZENE	5.0	ND	100	43.6	ND	200	95.3	110.0	NA	43.6	5	172	NA	47.7	55.0	5	172	NA	14	40					
1,4-DICHLOROBENZENE	10.0	ND	100	43.5	ND	200	96.3	108.2	NA	43.5	20	124	NA	47.6	54.1	20	124	NA	13	40					
BENZYL ALCOHOL	5.0	ND	100	49.9	ND	200	117.6	130.8	NA	49.9	5	150	NA	58.8	65.4	5	150	NA	11	40					
1,2-DICHLOROBENZENE	5.0	ND	100	45.9	ND	200	100.9	115.1	NA	45.9	32	129	NA	50.5	57.5	32	129	NA	13	40					
2-METHYLPHENOL	5.0	ND	100	54.7	ND	200	115.0	123.9	NA	54.7	5	150	NA	57.5	62.0	5	150	NA	7	40					
BIS(2-CHLOROISOPROPYL)ETH	5.0	ND	100	74.0	ND	200	152.6	170.8	NA	74.0	36	166	NA	76.3	85.4	36	166	NA	11	40					
3- & 4-METHYLPHENOL	5.0	ND	100	49.9	ND	200	106.8	118.1	NA	49.9	5	150	NA	53.4	59.1	5	150	NA	10	40					
N-NITROSO-DI-N-PROPYLAMINE	5.0	ND	100	62.9	ND	200	123.7	138.3	NA	62.9	5	230	NA	61.8	69.1	5	230	NA	11	40					
HEXACHLOROETHANE	5.0	ND	100	45.2	ND	200	97.2	110.5	NA	45.2	40	113	NA	48.6	55.3	40	113	NA	13	40					
NITROBENZENE	5.0	ND	100	59.8	ND	200	120.8	136.6	NA	59.8	35	180	NA	60.4	68	35	180	NA	12	40					
ISOPHORONE	5.0	ND	100	72.6	ND	200	140.5	154.6	NA	72.6	21	196	NA	70.2	77.3	21	196	NA	10	40					
2-NITROPHENOL	5.0	ND	100	61.3	ND	200	119.0	128.8	NA	61.3	29	182	NA	59.5	64.3	29	182	NA	8	40					
2,4-DIMETHYLPHENOL	5.0	ND	100	65.5	ND	200	125.0	141.6	NA	65.5	32	119	NA	62.5	70.8	32	119	NA	12	40					
BIS(2-CHLOROETHOXY)METHAN	25.0	ND	100	63.8	ND	200	123.2	138.1	NA	63.8	33	184	NA	61.6	69.1	33	184	NA	11	40					
BENZOIC ACID	5.0	ND	100	7.9	ND	200	24.7	25.7	NA	7.9	5	150	NA	12.4	12.9	5	150	NA	4	40					
2,4-DICHLOROPHENOL	5.0	ND	100	60.1	ND	200	121.0	132.0	NA	60.1	39	135	NA	60.5	66.0	39	135	NA	9	40					
1,2,4-TRICHLOROBENZENE	5.0	ND	100	46.9	ND	200	100.6	114.8	NA	46.9	44	142	NA	50.3	57.4	44	142	NA	13	40					
NAPHTHALENE	5.0	ND	100	51.9	ND	200	107.9	123.8	NA	51.9	21	133	NA	54.0	61.9	21	133	NA	14	40					
4-CHLOROANILINE	5.0	ND	100	32.7	ND	200	88.2	100.8	NA	32.7	5	150	NA	44.1	50.4	5	150	NA	13	40					
HEXACHLOROBUTADIENE	10.0	ND	100	45.8	ND	200	94.4	108.8	NA	45.8	24	116	NA	47.2	54.4	24	116	NA	14	40					
4-CHLORO-3-METHYLPHENOL	5.0	ND	100	70.4	ND	200	140.6	149.7	NA	70.4	22	147	NA	70.3	74.8	22	147	NA	6	40					
2-METHYLNAPHTHALENE	5.0	ND	100	55.0	ND	200	114.7	126.6	NA	55.0	5	150	NA	57.3	63.3	5	150	NA	10	40					
HEXACHLOROCYCLOPENTADIE	5.0	ND	100	33.1	ND	200	49.7	52.4	NA	33.1	5	150	NA	24.9	26.2	5	150	NA	5	40					
2,4,6-TRICHLOROPHENOL	25.0	ND	100	69.8	ND	200	134.0	147.0	NA	69.8	37	144	NA	67.0	73.5	37	144	NA	9	40					
2,4,5-TRICHLOROPHENOL	5.0	ND	100	72.9	ND	200	146.5	158.1	NA	72.9	5	150	NA	73.3	79.1	5	150	NA	8	40					
2-CHLORONAPHTHALENE	25.0	ND	100	61.3	ND	200	123.4	138.5	NA	61.3	60	118	NA	61.7	69.2	60	118	NA	12	40					
2-NITROANILINE	5.0	ND	100	66.3	ND	200	135.5	140.6	NA	66.3	5	150	NA	67.8	70.3	5	150	NA	4	40					
DIMETHYLPHTHALATE	5.0	ND	100	83.6	ND	200	181.9	183.2	NA	83.6	5	112	NA	90.9	92	5	112	NA	1	40					
ACENAPHTHYLENE	5.0	ND	100	66.9	ND	200	130.7	145.2	NA	66.9	33	145	NA	65.3	72.6	33	145	NA	11	40					
2,6-DINITROTOLUENE	5.0	ND	100	82.2	ND	200	180.2	182.8	NA	82.2	50	158	NA	90.1	91.4	50	158	NA	1	40					
3-NITROANILINE	25.0	ND	100	52.6	ND	200	116.8	124.4	NA	52.6	5	150	NA	58.4	62.2	5	150	NA	6	40					
ACENAPHTHENE	5.0	ND	100	67.4	ND	200	131.8	142.3	NA	67.4	47	145	NA	65.9	71.1	47	145	NA	8	40					
2,4-DINITROPHENOL	25.0	ND	100	69.8	ND	200	151.0	128.5	NA	69.8	5	191	NA	75.5	64.2	5	191	NA	16	40					
4-NITROPHENOL	25.0	ND	100	55.1	ND	200	121.1	127.8	NA	55.1	5	132	NA	60.6	63.9	5	132	NA	5	40					
DIBENZOFURAN	5.0	ND	100	71.8	ND	200	139.0	151.2	NA	71.8	5	150	NA	69.5	75.6	5	150	NA	8	40					
2,4-DINITROTOLUENE	5.0	ND	100	94.0	ND	200	210.6	202.3	NA	94.0	39	139	NA	105.4	101.1	39	139	NA	4	40					

NOTES & DEFINITIONS :
NA = NOT APPLICABLE
NS = NOT SPIKED
ND = NOT DETECTED
RDL=REPORTING DETECTION LIMIT

KEMRON ENVIRONMENTAL SERVICES , OVL
SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP : WG49078 | EXT DATE : 11/7/98 | RUN DATE : 11/9/98 | INSTRUMENT : HPMS3
METHOD : 8270 | BENCH SHEET : V104P48 | SMPL ID : 11-011-14 | ANALYST : mdc
MATRIX : WATER | BLK FLNM : 14968.D | SMPL FLNM : 15001.D
CONCENTRATION UNITS : UG/L | LCS FLNM: 14969.D | MS FLNM : 15002.D
PREP WORK GRP : WG48815 | MSD FLNM : 15003.D

	CONCENTRATION , ug/L								PERCENT RECOVERY , %									PERCENT			BEYOND LIMITS				
ANALYTE	RDL	BLANK	LCS SPIKE ADDED	LCS	SAMPLE	MS SPIKE ADDED	MS	MSD	BLANK	LCS	LCS LCL	LCS UCL	SAMPLE	MS	MSD	MS LCL	MS UCL	DUP RPD	MSD RPD	RPD UCL	SAMPLE	BLANK	LCS	MS	MSD
DIETHYLPHTHALATE	5.0	ND	100	91.2	ND	200	204.8	197.9	NA	91.2	5	114	NA	102.4	98.9	5	114	NA	3	40					
FLUORENE	5.0	ND	100	75.3	ND	200	158.0	163.6	NA	75.3	25	158	NA	79.0	81.8	25	158	NA	4	40					
4-CHLOROPHENYL-PHENYL ETH	5.0	ND	100	72.7	ND	200	149.1	154.8	NA	72.7	59	121	NA	74.0	77.4	59	121	NA	4	40					
4-NITROANILINE	25.0	ND	100	84.6	ND	200	194.3	185.8	NA	84.6	5	150	NA	97.2	92.9	5	150	NA	4	40					
1,2-DIPHENYLHYDRAZINE *	5.0	ND	100	80.6	ND	200	176.6	180.7	NA	80.6	5	150	NA	88.3	90.4	5	150	NA	2	40					
4,6-DINITRO-2-METHYLPHENOL	25.0	ND	100	100.9	ND	200	235.0	207.3	NA	100.9	5	181	NA	117.5	103.7	5	181	NA	12	40					
N-NITROSODIPHENYLAMINE **	5.0	ND	100	84.0	ND	200	149.7	143.5	NA	84.0	5	150	NA	74.9	72	5	150	NA	4	40					
4-BROMOPHENYL-PHENYL ETH	5.0	ND	100	69.8	ND	200	152.6	150.8	NA	69.8	53	127	NA	76.3	75.4	53	127	NA	1	40					
HEXACHLOROBENZENE	5.0	ND	100	84.9	ND	200	187.2	181.4	NA	84.9	5	152	NA	93.6	90.7	5	152	NA	3	40					
PENTACHLOROPHENOL	25.0	ND	100	75.0	ND	200	230.0	203.5	NA	75.0	14	176	NA	115.0	101.7	14	176	NA	12	40					
PHENANTHRENE	5.0	ND	100	87.8	ND	200	205.3	194.0	NA	87.8	54	120	NA	102.6	97.0	54	120	NA	6	40					
ANTHRACENE	5.0	ND	100	90.5	ND	200	198.7	197.4	NA	90.5	27	133	NA	99.3	98.7	27	133	NA	1	40					
CARBAZOLE	5.0	ND	100	103.4	ND	200	240.2	228.9	NA	103.4	5	150	NA	120.1	114.5	5	150	NA	5	40					
DI-N-BUTYLPHTHALATE	5.0	ND	100	97.4	ND	200	224.5	212.4	NA	97.4	1	118	NA	112.2	106.2	1	118	NA	6	40					
FLUORANTHENE	5.0	ND	100	98.5	ND	200	226.4	215.4	NA	98.5	26	137	NA	113.2	108	26	137	NA	5	40					
PYRENE	5.0	ND	100	100.6	ND	200	229.6	211.1	NA	100.6	52	115	NA	114.8	105.6	52	115	NA	8	40					
BUTYLBENZYLPHTHALATE	5.0	ND	100	104.3	ND	200	244.3	223.3	NA	104.3	5	152	NA	122.1	112	5	152	NA	9	40					
BENZO(A)ANTHRACENE	10.0	ND	100	103.6	ND	200	234.0	218.3	NA	103.6	5	262	NA	117.0	109.2	5	262	NA	7	40					
3,3'-DICHLOROBENZIDINE	5.0	ND	100	98.0	ND	200	96.4	100.2	NA	98.0	33	143	NA	48.2	50.1	33	143	NA	4	40					
CHRYSENE	5.0	ND	100	99.1	ND	200	229.1	210.8	NA	99.1	17	168	NA	114.5	105.4	17	168	NA	8	40					
BIS(2-ETHYLHEXYL)PHTHALATE	5.0	ND	100	100.2	ND	200	238.0	216.2	NA	100.2	8	158	NA	119.0	108.1	8	158	NA	10	40					
DI-N-OCTYLPHTHALATE	5.0	ND	100	112.1	ND	200	253.6	234.4	NA	112.1	4	146	NA	126.8	117.2	4	146	NA	8	40					
BENZO(B)FLUORANTHENE	5.0	ND	100	110.3	ND	200	239.3	217.4	NA	110.3	24	159	NA	119.6	108.7	24	159	NA	10	40					
BENZO(K)FLUORANTHENE	5.0	ND	100	110.3	ND	200	247.4	234.6	NA	110.3	11	162	NA	123.7	117.3	11	162	NA	5	40					
BENZO(A)PYRENE	5.0	ND	100	109.1	ND	200	237.4	220.3	NA	109.1	17	163	NA	118.7	110.2	17	163	NA	7	40					
INDENO(1,2,3-CD)PYRENE	5.0	ND	100	106.5	ND	200	247.6	227.0	NA	106.5	5	171	NA	123.8	113.5	5	171	NA	9	40					
DIBENZ(A,H)ANTHRACENE	5.0	ND	100	116.5	ND	200	271.6	248.8	NA	116.5	5	227	NA	135.8	124.4	5	227	NA	9	40					
BENZO(G,H,I)PERYLENE	5.0	ND	100	108.6	ND	200	253.2	231.0	NA	108.6	5	219	NA	126.6	115.5	5	219	NA	9	40					
SURROGATES																									
2-FLUOROPHENOL		35.3	100	40.4	41.95	100	40.0	45.3	35.3	40.4	21	100	42.0	40.0	45.3	21	100								
PHENOL - D5		24.1	100	27.0	28.2	100	27.8	31.1	24.1	27.0	10	94	28.2	27.8	31.1	10	94								
NITROBENZENE - D5		27.6	50	31.5	32.4	50	30.9	34.2	55.3	63.0	35	114	64.8	61.8	68.3	35	114								
2-FLUOROBIPHENYL		27.5	50	35.3	33.7	50	32.3	37.1	55.1	70.6	43	116	67.4	64.5	74.3	43	116								
2,4,6-TRIBROMOPHENOL		53.4	100	84.7	68.9	100	96.5	93.2	53.4	84.7	10	123	68.9	96.5	93.2	10	123								
p-TERPHENYL - D14		47.8	50	48.0	59.5	50	71.3	59.7	95.6	96.0	33	141	118.9	142.6	119.4	33	141							H	

KEMRON ENVIRONMENTAL SERVICES , OVL
SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP : WG49125 EXT DATE : 11/9/98
METHOD : 8270 BENCH SHEET : V104P98
MATRIX : SOIL BLK FLNM : 12167
CONCENTRATION UNITS : UG/KG LCS FLNM : 12168
PREP WORK GRP : WG49031

RUN DATE : 11/10/98
SMPL ID : NA
SMPL FLNM : NA
MS FLNM : NA
MSD FLNM : NA

INSTRUMENT : HPMS4
ANALYST : MLS

ANALYTE	CONCENTRATION , ug / Kg								PERCENT RECOVERY , %									PERCENT			BEYOND LIMITS				
	RDL	BLAN	LCS SPIKE ADDED	LCS	SAMPLE	MS SPIKE ADDED	MS	MSD	BLANK	LCS	LCS LCL	LCS UCL	SAMPLE	MS	MSD	MS LCL	MS UCL	% RPD	RPD LIMIT	BEYOND RPD LIMIT	SAMPLE	BLANK	LCS	MS	MSD
PYRIDINE	165	ND	1670	140	ND	1670	NA	NA	NA	8.4	25	150	NA	NA	NA	25	150	NA	40				L		
N-NITROSODIMETHYLAMI	165	ND	1670	1088	ND	1670	NA	NA	NA	65.2	25	150	NA	NA	NA	25	150	NA	40						
ANILINE	165	ND	1670	238	ND	1670	NA	NA	NA	14.2	25	150	NA	NA	NA	25	150	NA	40				L		
PHENOL	165	ND	1670	1059	ND	1670	NA	NA	NA	63.4	25	135	NA	NA	NA	25	135	NA	40						
BIS(2-CHLOROETHYL)ET	165	ND	1670	1057	ND	1670	NA	NA	NA	63.3	34	135	NA	NA	NA	34	135	NA	40						
2-CHLOROPHENOL	165	ND	1670	1019	ND	1670	NA	NA	NA	61.0	31	135	NA	NA	NA	31	135	NA	40						
1,3-DICHLOROBENZENE	165	ND	1670	963	ND	1670	NA	NA	NA	57.6	26	135	NA	NA	NA	26	135	NA	40						
1,4-DICHLOROBENZENE	165	ND	1670	994	ND	1670	NA	NA	NA	59.5	25	135	NA	NA	NA	25	135	NA	40						
BENZYL ALCOHOL	165	ND	1670	1070	ND	1670	NA	NA	NA	64.1	25	135	NA	NA	NA	25	135	NA	40						
1,2-DICHLOROBENZENE	165	ND	1670	1030	ND	1670	NA	NA	NA	61.7	32	135	NA	NA	NA	32	135	NA	40						
2-METHYLPHENOL	165	ND	1670	1085	ND	1670	NA	NA	NA	64.9	25	135	NA	NA	NA	25	135	NA	40						
BIS(2-CHLOROISOPROPY	165	ND	1670	1088	ND	1670	NA	NA	NA	65.1	26	175	NA	NA	NA	26	175	NA	40						
3- & 4-METHYLPHENOL	165	ND	1670	1108	ND	1670	NA	NA	NA	66.3	25	135	NA	NA	NA	25	135	NA	40						
N-NITROSO-DI-N-PROPYL	165	ND	1670	1124	ND	1670	NA	NA	NA	67.3	27	135	NA	NA	NA	27	135	NA	40						
HEXACHLOROETHANE	165	ND	1670	1049	ND	1670	NA	NA	NA	62.8	25	163	NA	NA	NA	25	163	NA	40						
NITROBENZENE	165	ND	1670	1088	ND	1670	NA	NA	NA	65.1	36	143	NA	NA	NA	36	143	NA	40						
ISOPHORONE	165	ND	1670	1275	ND	1670	NA	NA	NA	76.4	25	175	NA	NA	NA	25	175	NA	40						
2-NITROPHENOL	165	ND	1670	1088	ND	1670	NA	NA	NA	65.2	34	135	NA	NA	NA	34	135	NA	40						
2,4-DIMETHYLPHENOL	165	ND	1670	1205	ND	1670	NA	NA	NA	72.2	35	149	NA	NA	NA	35	149	NA	40						
BIS(2-CHLOROETHOXY)M	165	ND	1670	1108	ND	1670	NA	NA	NA	66.3	39	135	NA	NA	NA	39	135	NA	40						
BENZOIC ACID	825	ND	1670	241	ND	1650	NA	NA	NA	14.4	25	172	NA	NA	NA	25	172	NA	40				L		
2,4-DICHLOROPHENOL	165	ND	1670	1097	ND	1670	NA	NA	NA	65.7	36	135	NA	NA	NA	36	135	NA	40						
1,2,4-TRICHLOROBENZEN	165	ND	1670	1046	ND	1670	NA	NA	NA	62.6	34	152	NA	NA	NA	34	152	NA	40						
NAPHTHALENE	165	ND	1670	1070	ND	1670	NA	NA	NA	64.1	40	135	NA	NA	NA	40	135	NA	40						
4-CHLOROANILINE	165	ND	1670	311	ND	1670	NA	NA	NA	18.7	35	146	NA	NA	NA	35	146	NA	40				L		
HEXACHLOROBUTADIEN	165	ND	1670	1094	ND	1670	NA	NA	NA	65.5	25	135	NA	NA	NA	25	135	NA	40						
4-CHLORO-3-METHYLPHE	165	ND	1670	1150	ND	1670	NA	NA	NA	68.9	34	135	NA	NA	NA	34	135	NA	40						
2-METHYLNAPHTHALENE	165	ND	1670	1079	ND	1670	NA	NA	NA	64.6	31	135	NA	NA	NA	31	135	NA	40						
HEXACHLOROCYCLOPEN	165	ND	1670	1008	ND	1670	NA	NA	NA	60.4	31	135	NA	NA	NA	31	135	NA	40						
2,4,6-TRICHLOROPHENO	165	ND	1670	1160	ND	1670	NA	NA	NA	69.4	29	138	NA	NA	NA	29	138	NA	40						
2,4,5-TRICHLOROPHENO	165	ND	1670	1206	ND	1670	NA	NA	NA	72.2	25	175	NA	NA	NA	25	175	NA	40						
2-CHLORONAPHTHALEN	165	ND	1670	1124	ND	1670	NA	NA	NA	67.3	50	135	NA	NA	NA	50	135	NA	40						
2-NITROANILINE	825	ND	1670	1011	ND	1670	NA	NA	NA	60.6	40	135	NA	NA	NA	40	135	NA	40						
DIMETHYLPHTHALATE	165	ND	1670	1188	ND	1670	NA	NA	NA	71.0	25	175	NA	NA	NA	25	175	NA	40						
ACENAPHTHYLENE	165	ND	1670	1141	ND	1670	NA	NA	NA	68.3	37	135	NA	NA	NA	37	135	NA	40						
2,6-DINITROTOLUENE	165	ND	1670	1255	ND	1670	NA	NA	NA	75.2	41	135	NA	NA	NA	41	135	NA	40						
3-NITROANILINE	825	ND	1670	523	ND	1670	NA	NA	NA	31.3	41	135	NA	NA	NA	41	135	NA	40				L		
ACENAPHTHENE	165	ND	1670	1149	ND	1670	NA	NA	NA	68.8	39	135	NA	NA	NA	39	135	NA	40						
2,4-DINITROPHENOL	825	ND	1670	869	ND	1670	NA	NA	NA	52.0	25	161	NA	NA	NA	25	161	NA	40						
4-NITROPHENOL	825	ND	1670	1312	ND	1670	NA	NA	NA	78.6	25	141	NA	NA	NA	25	141	NA	40						
DIBENZOFURAN	165	ND	1670	1206	ND	1670	NA	NA	NA	72.2	42	135	NA	NA	NA	42	135	NA	40						
2,4-DINITROTOLUENE	165	ND	1670	1255	ND	1670	NA	NA	NA	75.2	29	149	NA	NA	NA	29	149	NA	40						

KEMRON ENVIRONMENTAL SERVICES , OVL
SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP : WG49125 EXT DATE : 11/9/98
METHOD : 8270 BENCH SHEET : V104P98
MATRIX : SOIL BLK FLNM : 12167
CONCENTRATION UNITS : UG/KG LCS FLNM : 12168
PREP WORK GRP : WG49031

RUN DATE : 11/10/98
SMPL ID : NA
SMPL FLNM : NA
MS FLNM : NA
MSD FLNM : NA

INSTRUMENT : HPMS4
ANALYST : MLS

ANALYTE	RDL	CONCENTRATION , ug / Kg							PERCENT RECOVERY , %									PERCENT			BEYOND LIMITS				
		BLAN	LCS SPIKE ADDED	LCS	SAMPLE	MS SPIKE ADDED	MS	MSD	BLANK	LCS	LCS LCL	LCS UCL	SAMPLE	MS	MSD	MS LCL	MS UCL	% RPD	RPD LIMIT	BEYOND RPD LIMIT	SAMPLE	BLANK	LCS	MS	MSD
[illegible]	[illegible]	ND	1670	1204	ND	1670	NA	NA	NA	72.1	27	135	NA	NA	NA	27	135	NA	40						
[illegible]	[illegible]	ND	1670	1150	ND	1670	NA	NA	NA	68.9	38	149	NA	NA	NA	38	149	NA	40						
4-CHLOROANILINE	[illegible]	ND	1670	1125	ND	1670	NA	NA	NA	67.4	41	142	NA	NA	NA	41	142	NA	40						
[illegible]	[illegible]	ND	1670	524	ND	1670	NA	NA	NA	31.3	30	153	NA	NA	NA	30	153	NA	40						
1,2-DIPHENYLHYDRAZINE	[illegible]	ND	1670	953	ND	1670	NA	NA	NA	57.1	25	150	NA	NA	NA	25	150	NA	40						
4,6-DINITRO-2-METHYLPHENOL	[illegible]	ND	1670	1307	ND	1670	NA	NA	NA	78.3	34	135	NA	NA	NA	34	135	NA	40						
N-NITROSODIPHENYLAMINE	[illegible]	ND	1670	990	ND	1670	NA	NA	NA	59.3	25	135	NA	NA	NA	25	135	NA	40						
4-BROMOPHENYLPHENYL ether	[illegible]	ND	1670	1021	ND	1670	NA	NA	NA	61.1	43	137	NA	NA	NA	43	137	NA	40						
HEXACHLOROBENZENE	[illegible]	ND	1670	1163	ND	1670	NA	NA	NA	69.6	36	143	NA	NA	NA	36	143	NA	40						
PENTACHLOROPHENOL	[illegible]	ND	1670	1108	ND	1670	NA	NA	NA	66.4	38	146	NA	NA	NA	38	146	NA	40						
PHENANTHRENE	[illegible]	ND	1670	1191	ND	1670	NA	NA	NA	71.3	44	135	NA	NA	NA	44	135	NA	40						
ANTHRACENE	[illegible]	ND	1670	1213	ND	1670	NA	NA	NA	72.7	35	175	NA	NA	NA	35	175	NA	40						
CARBAZOLE	[illegible]	ND	1670	918	ND	1670	NA	NA	NA	55.0	25	150	NA	NA	NA	25	150	NA	40						
DI-n-BUTYLPHTHALATE	[illegible]	ND	1670	1224	ND	1670	NA	NA	NA	73.3	25	136	NA	NA	NA	25	136	NA	40						
FLUORANTHENE	[illegible]	ND	1670	1230	ND	1670	NA	NA	NA	73.6	37	135	NA	NA	NA	37	135	NA	40						
PYRENE	[illegible]	ND	1670	1301	ND	1670	NA	NA	NA	77.9	37	146	NA	NA	NA	37	146	NA	40						
BUTYLBENZYLPHTHALATE	[illegible]	ND	1670	1307	ND	1670	NA	NA	NA	78.3	25	135	NA	NA	NA	25	135	NA	40						
BENZO(a)ANTHRACENE	[illegible]	ND	1670	1244	ND	1670	NA	NA	NA	74.5	41	143	NA	NA	NA	41	143	NA	40						
3,3'-DICHLOROBENZIDINE	[illegible]	ND	1670	20	ND	1670	NA	NA	NA	1.2	25	175	NA	NA	NA	25	175	NA	40				L		
CHRYSENE	[illegible]	ND	1670	1211	ND	1670	NA	NA	NA	72.5	45	143	NA	NA	NA	45	143	NA	40						
BIS(2-ETHYLHEXYL)PHTHALATE	[illegible]	ND	1670	1318	ND	1670	NA	NA	NA	78.9	25	139	NA	NA	NA	25	139	NA	40						
DI-n-OCTYLPHTHALATE	[illegible]	ND	1670	1474	ND	1670	NA	NA	NA	88.3	28	137	NA	NA	NA	28	137	NA	40						
BENZO(b)FLUORANTHENE	[illegible]	ND	1670	1414	ND	1670	NA	NA	NA	84.7	27	135	NA	NA	NA	27	135	NA	40						
BENZO(k)FLUORANTHENE	[illegible]	ND	1670	1475	ND	1670	NA	NA	NA	88.3	25	150	NA	NA	NA	25	150	NA	40						
BENZO(a)PYRENE	[illegible]	ND	1670	1399	ND	1670	NA	NA	NA	83.8	31	135	NA	NA	NA	31	135	NA	40						
INDENO(1,2,3-cd)PYRENE	[illegible]	ND	1670	1358	ND	1670	NA	NA	NA	81.2	25	170	NA	NA	NA	25	170	NA	40						
DIBENZO(a,h)ANTHRACENE	[illegible]	ND	1670	1445	ND	1670	NA	NA	NA	86.5	40	135	NA	NA	NA	40	135	NA	40						
BENZO(g,h,i)PERYLENE	[illegible]	ND	1670	1371	ND	1670	NA	NA	NA	82.1	25	159	NA	NA	NA	25	159	NA	40						
SURROGATES																									
2-FLUOROPHENOL		58.2	100	65.7	NA	100	NA	NA	58.2	65.7	25	121				25	121								
PHENOL - D6		64.8	100	67.2	NA	100	NA	NA	64.8	67.2	24	113				24	113								
NITROBENZENE - D5		32.1	50	35.0	NA	50	NA	NA	64.1	70.0	23	120				23	120								
2-FLUOROBIPHENYL		36.4	50	37.9	NA	50	NA	NA	72.9	75.8	30	115				30	115								
2,4,6-TRIBROMOPHENOL		72.8	100	77.1	NA	100	NA	NA	72.8	77.1	19	122				19	122								
TERPHENYL - D14		44.9	50	46.6	NA	50	NA	NA	89.8	93.1	18	137				18	137								

NOTES & DEFINITIONS :
NA = NOT APPLICABLE
ND = NOT DETECTED
RDL=REPORTING DETECTION LIMIT
NS = NOT SPIKED
L= below QC limit
H=above QC limit
* = RPD above limit

MARIETTA, OH

QUALITY CONTROL SUMMARY / 8081 SOILS , FRONT

INSTRUMENT : HP 9

SAMPLE ID : 11-098-01

EXT'N DATE : 11/6/98 ANALYST : ECL BLK FLNM : 1313 SMPL FLNM : 1316

EXT'N BENCH SHT : V104P66 RUN DATE : 11/11/98 LCS FLNM : 1314 MS FLNM : 1317

EXT'N WORK GRP : WG48947 ANAL WORK GRP : WG49204 MSD FLNM : 1318

COMPOUND	RDL	CONCENTRATION , ug/kg Blank	LCS	Sample	MS	MSD	% RECOVERY Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	PERCENT MS/MSD RPD	RPD Advisory Limit	Blank	LCS	Sample	MS	MSD
ALPHA-BHC	1.7	ND	13.8	ND	12.2	12.3	NA	82.5	37	134	NA	72.8	73.9	51	145	1.4	0-43					
GAMMA-BHC	1.7	ND	14.7	ND	12.7	12.9	NA	87.8	32	127	NA	75.9	77.3	54	134	1.9	0-18					
BETA-BHC	1.7	ND	14.5	ND	14.0	14.1	NA	86.8	17	147	NA	83.6	84.2	51	129	0.7	0-28					
HEPTACHLOR	1.7	ND	15.4	ND	16.5	16.8	NA	92.0	34	111	NA	99.1	100.3	40	139	1.3	0-37					
DELTA-BHC	1.7	ND	15.5	ND	14.8	14.9	NA	92.8	19	140	NA	88.9	89.3	56	138	0.5	0-78					
ALDRIN	1.7	ND	14.9	ND	50.6	56.2	NA	89.0	42	122	NA	303.3	336.3	26	143	10.3	0-38				H	H
HEPTACHLOR EPOXIDE	1.7	ND	15.0	ND	17.6	17.9	NA	90.1	37	142	NA	105.6	107.5	51	135	1.8	0-40					
GAMMA-CHLORDANE	1.7	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40					
ALPHA-CHLORDANE	1.7	ND	NA	ND	NA	NA	NA	NA	54	119	NA	NA	NA	45	115	NA	0-17					
ENDOSULFAN I	1.7	ND	12.4	ND	13.5	13.8	NA	74.0	45	153	NA	80.8	82.5	37	123	2.1	0-22					
4,4-DDE	3.3	ND	15.3	ND	56.3	61.5	NA	91.5	30	145	NA	337.1	388.6	64	152	8.9	0-23				H	H
DIELDRIN	3.3	ND	16.2	ND	948	971	NA	97.3	36	146	NA	5679.8	5812.4	23	171	2.3	0-20				H	H
ENDRIN	3.3	ND	15.1	ND	135	146	NA	90.2	30	147	NA	807.4	873.7	56	154	7.9	0-28				H	H
4,4-DDD	3.3	ND	16.2	ND	39.3	16.6	NA	96.7	21	141	NA	235.2	99.4	56	179	81.2	0-30				H	
ENDOSULFAN II	3.3	ND	12.8	ND	1388	1424	NA	76.8	D	202	NA	8309.9	8528.2	21	117	2.6	0-18				H	H
4,4-DDT	3.3	ND	15.9	ND	2690	0.0	NA	95.4	25	160	NA	16108.1	0.0	42	168	200.0	0-22				H	L
ENDRIN ALDEHYDE	3.3	ND	11.1	ND	123	131	NA	66.6	NA	NA	NA	738.1	782.6	21	115	5.9	0-40				H	H
ENDOSULFAN SULFATE	3.3	ND	11.4	ND	0.00	0.00	NA	68.5	26	144	NA	0.0	0.0	31	117	#DIV/0!	0-30				L	L
METHOXYCHLOR	17	ND	14.4	ND	218	232	NA	86.3	NA	NA	NA	1306.8	1386.2	26	196	5.9	0-19				H	H
ENDRIN KETONE	3.3	ND	14.2	ND	18.2	19.6	NA	84.9	NA	NA	NA	109.2	118	NA	NA	8.0						
Tech-CHLORDANE	33	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40					
TOXAPHENE	33	ND	NA	ND	NA	NA	NA	NA	41	126	NA	NA	NA	40	125	NA	0-40					
SURROGATES																						
2,4,5,6-TETRACHLORO-M-XYLENE		15.1	13.7	14.3	12.6	12.6	75.7	68.6	13	154	71.6	62.9	63.1	13	154							
DECACHLOROBIPHENYL		18.4	18.7	35.8	34.8	47.5	92.0	83.7	25	140	177.8	174.2	237.7	25	140					H	H	H

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 16.7 ug/kg

SURROGATES spiked at 20 ug/kg

NA = NOT APPLICABLE

DL = DILUTED OUT

ND = NOT DETECTED

RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE

MS=MATRIX SPIKE

MSD=MATRIX SPIKE DUPLICATE

KEMRON ENVIRONMENTAL SERVICES

MARIETTA, OH

QUALITY CONTROL SUMMARY / 8080 SOILS , REAR

INSTRUMENT : HP 9

EXT'N DATE : 11/6/98 ANALYST : ECL BLK FLNM : 1313 SAMPLE ID : 11-098-01

EXT'N BENCH SHT : V104P66 RUN DATE : 11/11/98 LCS FLNM : 1314 SMPL FLNM : 1316

EXT'N WORK GRP : WG48947 ANAL WORK GRP : WG49204 MS FLNM : 1317

MSD FLNM : 1318

COMPOUND	RDL	CONCENTRATION , ug/kg Blank	LCS	Sample	MS	MSD	% RECOVERY Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	PERCENT MS LCL	MS UCL	MS/MSD RPD	RPD Advisory Limit	Blank	LCS	Sample	MS	MSD
ALPHA-BHC	1.7	ND	15.7	ND	14.8	14.3	NA	94.0	37	134	NA	88.4	85.9	51	145	2.9	0-43					
GAMMA-BHC	1.7	ND	16.9	ND	15.6	16.1	NA	101.2	32	127	NA	93.5	96.6	54	134	3.2	0-18					
BETA-BHC	1.7	ND	15.8	ND	15.4	14.0	NA	94.4	17	147	NA	92.1	83.9	51	129	9.3	0-28					
HEPTACHLOR	1.7	ND	16.0	ND	15.4	15.0	NA	95.8	34	111	NA	92.1	89.9	40	139	2.5	0-37					
DELTA-BHC	1.7	ND	18.2	ND	19.9	19.1	NA	108.8	19	140	NA	119.0	114.3	56	138	4.1	0-78					
ALDRIN	1.7	ND	17.2	ND	15.7	15.1	NA	103.1	42	122	NA	94.1	90.6	26	143	3.8	0-38					
HEPTACHLOR EPOXIDE	1.7	ND	17.5	ND	565	592	NA	104.8	37	142	NA	3386.0	3542.2	51	135	4.5	0-40			H	H	
GAMMA-CHLORDANE	1.7	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40					
ALPHA-CHLORDANE	1.7	ND	NA	ND	NA	NA	NA	NA	54	119	NA	NA	NA	45	115	NA	0-17					
ENDOSULFAN I	1.7	ND	14.1	ND	0.0	0.0	NA	84.6	45	153	NA	0.0	0.0	37	123	#DIV/0!	0-22			L	L	
4,4-DDE	3.3	ND	18.9	ND	188	195	NA	113.2	30	145	NA	1127.9	1169.0	64	152	3.6	0-23			H	H	
DIELDRIN	3.3	ND	19.0	ND	1442	1783	NA	114.0	36	146	NA	8635.0	10675.1	23	171	21.1	0-20			H	H	
ENDRIN	3.3	ND	18.9	ND	449	469	NA	101.5	30	147	NA	2690.7	2808.7	56	154	4.3	0-28			H	H	
4,4-DDD	3.3	ND	18.6	ND	2527	2571	NA	110.9	31	141	NA	15133.2	15394.1	56	179	1.7	0-30			H	H	
ENDOSULFAN II	3.3	ND	15.0	ND	2141	2204	NA	89.6	D	202	NA	12822.2	13197.0	21	117	2.9	0-18			H	H	
4,4-DDT	3.3	ND	19.3	ND	3304	3827	NA	115.7	25	160	NA	19785.6	22915.1	42	168	14.7	0-22			H	H	
ENDRIN ALDEHYDE	3.3	ND	13.7	ND	539	554	NA	82.3	NA	NA	NA	3228.8	3314.6	21	115	2.6	0-40			H	H	
ENDOSULFAN SULFATE	3.3	ND	12.9	ND	21.9	21.3	NA	77.4	26	144	NA	131.3	127.4	31	117	3.0	0-30			H	H	
METHOXYCHLOR	17	ND	17.8	ND	2931	3013	NA	106.6	NA	NA	NA	17549.5	18044.8	26	196	2.8	0-19			H	H	
ENDRIN KETONE	3.3	ND	16.8	ND	3061	3104	NA	100.4	NA	NA	NA	18450.0	18587.7	NA	NA	0.7						
Tech-CHLORDANE	33	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40					
TOXAPHENE	33	ND	NA	ND	NA	NA	NA	NA	41	126	NA	NA	NA	40	125	NA	0-40					
SURROGATES																						
2,4,5,6-TETRACHLORO-M-XYLENE		16.4	15.7	17.8	15.6	15.6	82.2	78.4	13	154	89.1	78.1	78.2	13	154							
DECACHLOROBIPHENYL		23.4	21.4	38.2	41.5	41.7	117.0	106.8	25	140	190.8	207.3	208.3	25	140					H	H	H

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 16.7 ug/kg LCS=LABORATORY CONTROL SAMPLE

SURROGATES spiked at 20 ug/kg MS=MATRIX SPIKE

NA = NOT APPLICABLE MSD=MATRIX SPIKE DUPLICATE

DL = DILUTED OUT

ND = NOT DETECTED

RDL=REPORTING DETECTION LIMIT

KEMRON ENVIRONMENTAL SERVICES

MARIETTA, OH

QUALITY CONTROL SUMMARY / 8081 WATERS , FRONT

INSTRUMENT : HP9

SAMPLE ID : 11-058-01

EXT'N DATE : 11/5/98 ANALYST : ECL BLK FLNM : 1325 SMPL FLNM : 1328

EXT'N BENCH SHT : V104P60 RUN DATE : 11/11/98 LCS FLNM : 1326 MS FLNM : 1329

EXT'N WORK GRP : WG48885 ANAL WORK GRP : WG49203 MSD FLNM : 1330

COMPOUND	RDL	CONCENTRATION , ug/L					% RECOVERY								PERCENT		
		Blank	LCS	Sample	MS	MSD	Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	MS/MSD RPD	RPD Advisory Limits
ALPHA-BHC	0.05	ND	0.388	ND	0.646	0.779	NA	77.6	37	134	NA	64.6	77.9	51	145	18.7	0-43
GAMMA-BHC	0.05	ND	0.415	ND	0.723	0.856	NA	83.0	32	127	NA	72.3	85.6	54	134	16.9	0-18
BETA-BHC	0.05	ND	0.464	ND	0.862	1.01	NA	92.8	17	147	NA	86.2	100.9	51	129	15.7	0-28
HEPTACHLOR	0.05	ND	0.396	ND	0.724	0.859	NA	79.2	34	111	NA	72.4	85.9	40	139	17.1	0-37
DELTA-BHC	0.05	ND	0.485	ND	0.916	1.03	NA	97.0	19	140	NA	91.6	103.2	56	136	11.9	0-78
ALDRIN	0.05	ND	0.366	ND	0.716	0.861	NA	73.2	42	122	NA	71.6	86.1	26	143	18.4	0-38
HEPTACHLOR EPOXIDE	0.05	ND	0.448	ND	0.846	0.980	NA	89.6	37	142	NA	84.6	98.0	51	135	14.7	0-40
GAMMA-CHLORDANE	0.05	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40
ALPHA-CHLORDANE	0.05	ND	NA	ND	NA	NA	NA	NA	54	119	NA	NA	NA	45	115	NA	0-17
ENDOSULFAN I	0.05	ND	0.374	ND	0.712	0.810	NA	74.8	45	153	NA	71.2	81.0	37	123	12.9	0-22
4,4-DDE	0.10	ND	0.460	ND	0.871	0.988	NA	92.0	30	145	NA	87.1	98.8	64	152	12.6	0-23
DIELDRIN	0.10	ND	0.495	ND	0.978	1.12	NA	99.0	36	146	NA	97.8	111.6	23	171	13.2	0-20
ENDRIN	0.10	ND	0.461	ND	0.950	1.10	NA	92.2	30	147	NA	95.0	110.2	56	154	14.6	0-28
4,4-DDD	0.10	ND	0.516	ND	0.993	1.14	NA	103.2	31	141	NA	99.3	113.8	56	179	13.6	0-30
ENDOSULFAN II	0.10	ND	0.421	ND	0.787	0.903	NA	84.2	D	202	NA	78.7	90.3	21	117	13.7	0-18
4,4-DDT	0.10	ND	0.497	ND	0.950	1.10	NA	99.4	25	160	NA	95.0	110.4	42	166	15.0	0-22
ENDRIN ALDEHYDE	0.10	ND	0.369	ND	0.662	0.778	NA	73.8	NA	NA	NA	66.2	77.8	21	115	16.1	0-40
ENDOSULFAN SULFATE	0.10	ND	0.400	ND	0.720	0.829	NA	80.0	26	144	NA	72.0	82.9	31	117	14.1	0-30
METHOXYCHLOR	0.50	ND	0.462	ND	0.850	0.955	NA	92.4	NA	NA	NA	85.0	95.5	26	196	11.6	0-19
ENDRIN KETONE	0.10	ND	0.459	ND	0.830	0.929	NA	91.8	NA	NA	NA	83.0	92.9	NA	NA	10.9	
Tech-CHLORDANE	1.00	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40
TOXAPHENE	1.00	ND	NA	ND	NA	NA	NA	NA	41	126	NA	NA	NA	40	125	NA	0-40
SURROGATES																	
2,4,5,6-TETRACHLORO-M-XYLENE		8.06	10.9	7.84	8.69	12.4	40.3	54.4	33	154	39.2	43.5	62.1	13	154		
DECACHLOROBIPHENYL		9.94	11.5	9.14	13.2	13.2	49.7	57.6	25	140	45.7	65.9	66.0	25	140		

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 0.5 ug/L

SURROGATES spiked at 20 ug/L

NA = NOT APPLICABLE

DL = DILUTED OUT

ND = NOT DETECTED

RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE

MS=MATRIX SPIKE

MSD=MATRIX SPIKE DUPLICATE

KEMRON ENVIRONMENTAL SERVICES

MARIETTA, OH

QUALITY CONTROL SUMMARY / 8081 WATERS , REAR

INSTRUMENT : HP9

SAMPLE ID : 11-058-01

EXT'N DATE : 11/5/98 ANALYST : ECL BLK FLNM : 1325 SMPL FLNM : 1328

EXT'N BENCH SHT : V104P60 RUN DATE : 11/11/98 LCS FLNM : 1326 MS FLNM : 1329

EXT'N WORK GRP : WG48885 ANAL WORK GRP : WG49203 MSD FLNM : 1330

COMPOUND	RDL	CONCENTRATION , ug/L					% RECOVERY							PERCENT				
		Blank	LCS	Sample	MS	MSD	Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	MS/MSD RPD	RPD Advisory Limists	Blank LCS Sample MS MSD
ALPHA-BHC	0.05	ND	0.440	ND	0.719	0.868	NA	88.0	37	134	NA	71.9	86.8	51	145	18.8	0-43	
GAMMA-BHC	0.05	ND	0.487	ND	0.853	0.973	NA	97.4	32	127	NA	83.5	97.3	54	134	15.5	0-38	
BETA-BHC	0.05	ND	0.490	ND	0.952	1.07	NA	98.0	17	147	NA	95.2	107.2	51	129	11.9	0-28	
HEPTACHLOR	0.05	ND	0.412	ND	0.753	0.885	NA	82.4	34	111	NA	75.3	88.5	40	139	16.1	0-37	
DELTA-BHC	0.05	ND	0.588	ND	1.12	1.26	NA	117.6	19	140	NA	112.1	126.3	58	138	11.9	0-78	
ALDRIN	0.05	ND	0.416	ND	0.818	0.982	NA	83.2	42	122	NA	81.8	98.2	28	143	16.2	0-38	
HEPTACHLOR EPOXIDE	0.05	ND	0.527	ND	0.983	1.09	NA	105.4	37	142	NA	98.3	109.2	51	135	10.5	0-40	
GAMMA-CHLORDANE	0.05	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40	
ALPHA-CHLORDANE	0.05	ND	NA	ND	NA	NA	NA	NA	54	119	NA	NA	NA	45	115	NA	0-17	
ENDOSULFAN I	0.05	ND	0.421	ND	0.809	0.898	NA	84.2	45	153	NA	80.9	89.8	37	123	10.4	0-22	
4,4-DDE	0.10	ND	0.566	ND	1.08	1.20	NA	113.2	30	145	NA	108.0	119.8	64	152	10.2	0-23	
DIELDRIN	0.10	ND	0.581	ND	1.11	1.24	NA	116.2	38	146	NA	111.4	123.8	23	171	10.5	0-28	
ENDRIN	0.10	ND	0.536	ND	1.08	1.22	NA	107.2	30	147	NA	107.7	122.3	56	154	12.7	0-28	
4,4-DDD	0.10	ND	0.592	ND	1.11	1.23	NA	118.4	31	141	NA	111.0	123.3	58	179	10.5	0-30	
ENDOSULFAN II	0.10	ND	0.483	ND	0.867	0.985	NA	96.6	D	202	NA	86.7	98.5	21	117	12.7	0-18	
4,4-DDT	0.10	ND	0.619	ND	1.16	1.31	NA	123.8	25	160	NA	116.1	130.8	42	168	11.9	0-22	
ENDRIN ALDEHYDE	0.10	ND	0.446	ND	0.799	0.917	NA	89.2	NA	NA	NA	79.9	91.7	21	115	13.8	0-40	
ENDOSULFAN SULFATE	0.10	ND	0.449	ND	0.802	0.910	NA	89.8	26	144	NA	80.2	91.0	31	117	12.8	0-30	
METHOXYCHLOR	0.10	ND	0.583	ND	1.10	1.24	NA	117	NA	NA	NA	110.4	124.3	26	196	11.8	0-19	
ENDRIN KETONE	0.50	ND	0.544	ND	0.955	1.06	NA	109	NA	NA	NA	95.5	106.1	NA	NA	10.5		
Tech-CHLORDANE	1.0	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40	
TOXAPHENE	1.0	ND	NA	ND	NA	NA	NA	NA	41	126	NA	NA	NA	40	125	NA	0-40	
SURROGATES																		
2,4,5,6-TETRACHLORO-M-XYLENE		9.60	11.0	8.55	9.39	11.1	48.0	55.2	13	154	42.7	46.9	55.5	13	154			
DECACHLOROBIPHENYL		13.4	15.9	11.5	17.2	17.4	67.1	79.3	25	140	57.7	86.2	87.1	25	140			

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 0.5 ug/L

SURROGATES spiked at 20 ug/L

NA = NOT APPLICABLE

DL = DILUTED OUT

ND = NOT DETECTED

RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE

MS=MATRIX SPIKE

MSD=MATRIX SPIKE DUPLICATE

KEMRON ENVIRONMENTAL SERVICES
MARIETTA, OH
QUALITY CONTROL SUMMARY / PCB WATERS , FRONT

EXT'N DATE : 11/5/98	INSTRUMENT : HP10		SMPL ID : 11-076-01
EXT'N BENCH SHT : V104P61	ANALYST : CDB	BLK FLNM : 002F0101	SMPL FLNM : 004F0101
EXT'N WORK GRP : WG48886	RUN DATE : 11/9/98	LCS FLNM : 003F0101	MS FLNM : 005F0101
	ANAL WORK GRP : WG49842	LCS Dup FLNM : NA	MSD FLNM : 006F0101

COMPOUND	RDL	CONCENTRATION , ug/L					% RECOVERY									PERCENT						
		Blank	LCS	Sample	MS	MSD	Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	MS/MSD RPD	RPD Advisory Limits	Blank	LCS	Sample	MS	MSD
AROCLOR 1016	0.5	ND	ND	ND	4.54	4.09	NA	NA	48	125	NA	90.7	81.8	48	125	10.4	NA					
AROCLOR 1221	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1232	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1242	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1248	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1254	1.0	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0-40					
AROCLOR 1260	1.0	ND	ND	ND	4.63	4.98	NA	NA	59	122	NA	92.5	100	59	122	7.5	NA					
SURROGATES																						
2,4,5,6-TETRACHLORO-M-XYLENE		0.103	0.113	0.134	0.252	0.193	51.5	56.5	13	154	67.0	63.0	46.3	13	154							
DECACHLOROBIPHENYL		0.113	0.122	0.141	0.299	0.360	56.5	61.0	25	140	70.5	74.8	90.0	25	140							

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at .25 ug/kg
SURROGATES spiked at .0200 ug/kg
NA = NOT APPLICABLE
DL = DILUTED OUT
ND = NOT DETECTED
RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE
MS=MATRIX SPIKE
MSD=MATRIX SPIKE DUPLICATE

KEMRON ENVIRONMENTAL SERVICES
MARIETTA, OH
QUALITY CONTROL SUMMARY / PCB SOILS, REAR

	INSTRUMENT : HP10		SMPL ID : 11-098-01
EXT'N DATE : 11/6/96	ANALYST : CDB	BLK FLNM : 055R0101	SMPL FLNM : 058R0101
EXT'N BENCH SHT : V104P67	RUN DATE : 11/9/96	LCS FLNM : 056R0101	MS FLNM : 059R0101
EXT'N WORK GRP : WG48948	ANAL WORK GRP : WG49025		MSD FLNM : 060R0101

COMPOUND	RDL	CONCENTRATION, ug/Kg					% RECOVERY									PERCENT						
		Blank	LCS	Sample	MS	MSD	Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	RPD	RPD Advisory Limits	Blank	LCS	Sample	MS	MSD
AROCLOR 1016	17.0	ND	95.6	33.2	112	124	NA	115	29	131	NA	95.0	109	29	131	9.6	NA					
AROCLOR 1221	17.0	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1232	17.0	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1242	17.0	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1248	17.0	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1254	33.0	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0-40					
AROCLOR 1260	33.0	ND	98.7	95606	111650	105009	NA	119	29	131	NA	19261	11289	29	131	6.1	NA				H	H
SURROGATES																						
2,4,5,6-TETRACHLORO-M-XYLENE		6.62	7.15	6.09	6.14	6.03	99.3	107	29	133	91.3	92.0	90.4	29	133							
DECACHLOROBIPHENYL		8.57	8.71	12.4	13.4	12.6	128	131	30	173	185	201	189	30	173					H	H	H

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 83.3 ug/kg
SURROGATES spiked at 6.67 ug/kg
NA = NOT APPLICABLE
DL = DILUTED OUT
ND = NOT DETECTED
RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE
MS=MATRIX SPIKE
MSD=MATRIX SPIKE DUPLICATE

ENVIRONMENTAL SERVICES

CHAIN-OF-CUSTODY RECORD

91083

Project Contact: WILLY BURTON

Turn Around Requirements:

Project No.: 4119-007

Project Name: Pedricktown

Sampler (print): Erin Klingebiel, Katherine Billow

Signature: Erin Klingebiel, Katherine Billow

Sample I.D. No.	Comp*	Grab	Date (gathered)	Time	Protocol CWA	Protocol SW846	NUMBER OF SAMPLES	Hold	VOC	SVOC	Pest/PCB	Cyanide log 11/3/98	TSS												ADDITIONAL REQUIREMENTS
WEIR 1102		✓	11/2/98	930					1	1															
WEIR 1102	✓			930							1	1	1												
MIX 1102	✓	✓		1100					1	1	1	1	1												
INLET 1102		✓		1100					1	1	1	1	1												X Vial acid w/headspace
WEIR 1101	✓			930									1												
WEIR 10/31	✓			930									1												
WEIR 10/30	✓			930									1												

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Erin Klingebiel	11/2/98	1500					

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:
			Natalie Booth	11/3/98	1000	C/C Sealed Samples Co

*Homogenize all composite samples prior to analysis

White – Lab Yellow – Office Pink – Field

Work Order 1981029 Client Ver-mD #of Samples 8 Due Date 11/17 Page 1

Sample #	Analyses	Reason	Removed By ADT	Removed From	Moved To	Reliq. By	Rel'd by ADT	Rel'd To	Rec'd By	Reason
01,03,04	8270	Ext	DIL 11/4/98 0830	walk-in	S/AB	Big	04 11/6/98 CEB 1,3 [illegible]	Archive Dumpster	Big Big	Archive Disposal
-05	8270	Ext	DIL 11/4/98 0830	walk-in	S/AB	Big	CEB 11/6/98 [illegible]	Archive	Big	Archive
02,03,04	PEST/PCB	Ext	CEB 11/05/98 @ 1112	WALK-IN	EZAB	Big	11/6/98 @ 0850	Dumpster	[illegible]	Disposal
9-4,6-8	TSS	Anal	DLN 11/5/98 @ 1241	Walk In	Wet	Big	DLN 11/5/98 @ 1525	Archive	Big	Archive
-05	PEST/PCB	Ext	CEB 11/06/98 @ 0850	WALK-IN	EZAB	Big	CEB 11/06/98 @ 1100	Archive	Big	Archive
05	PCT-5	test	11/6/98 [illegible]	archive	wet	Big	[illegible]	archive	Big	Archive
01,03,04,05	8260	Analysis	SLT 11/6/98 1500	V1	Vol	Big	MES 11/6/98 1600	Archive	Big	Archive
05	BNA	RE EXT	CEB 11/09/98 @ 1130	Archive	EZAB	Big	CEB 11/09/98 @ 1410	Archive	Big	Archive

KEMRON Environmental Services
109 Satellite Park
Marietta, Ohio 45750
Phone: (740) 373-4071

Versar, Inc.
9200 Rumsey Road
Columbia, MD 21045-1934

Attention: William Burton

PO Number:
Account Number: VERSAR-MD-331

Login #: L9811111
Report Date: 11/20/98
Work ID: PEDRICKTOWN DISPOSAL
Date Received: 11/06/98

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9811111-01	WEIR 110598/COMP	L9811111-02	INLET 110598/GRAB/TOP
L9811111-03	INLET 110598/GRAB/BOTTOM	L9811111-04	MIX 110598
L9811111-05	WEIR 110498	L9811111-06	WEIR 110398

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

Certified By
Dennis S. Tepe

KEMRON
ENVIRONMENTAL SERVICES

Login #L9811111
November 20, 1998 02:12 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9811111-01
Client Sample ID: WEIR 110598/COMP
Site/Work ID: PEDRICKTOWN DISPOSAL

Matrix: Water
Collected: 11/05/98 N/A

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	27		5.0	1	N/A	DLN	11/09/98	11:45	160.2

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811111-01
Client Sample ID: WEIR 110598/COMP
Site/Work ID: PEDRICKTOWN DISPOSAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/05/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/09/98
Analysis Date: 11/10/98 Time: 12:48

Instrument: HP10
Analyst: CDB
Lab File ID: 058R0101

Method: 8082/3550
Run ID: R56138
Batch : WG49060

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016.....	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221.....	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232.....	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242.....	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248.....	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254.....	ug/L		ND	1.0	1
11096-82-5	Aroclor-1260.....	ug/L		ND	1.0	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene.....	41.4	(13 - 154%)
Decachlorobiphenyl.....	37.5	(25 - 140%)

RL = Reporting Limit

KEMRON ENVI[illegible]MENTAL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811111-01
Client Sample ID: WEIR 110598/COMP
Site/Work ID: PEDRICKTOWN DISPOSAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/05/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/09/98
Analysis Date: 11/10/98 Time:

Instrument: HP9
Analyst: ECL
Lab File ID: 1283

Method: 8081A\3510C
Run ID: R56302
Batch : WG49091

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L		ND	0.05	1
319-85-7	beta-BHC	ug/L		ND	0.05	1
319-86-8	delta-BHC	ug/L		ND	0.05	1
58-89-9	gamma-BHC (Lindane)	ug/L		ND	0.05	1
76-44-8	Heptachlor	ug/L		ND	0.05	1
309-00-2	Aldrin	ug/L		ND	0.05	1
1024-57-3	Heptachlor epoxide	ug/L		ND	0.05	1
959-98-8	Endosulfan I	ug/L		ND	0.05	1
60-57-1	Dieldrin	ug/L		ND	0.10	1
72-55-9	4,4'-DDE	ug/L		ND	0.10	1
72-20-8	Endrin	ug/L		ND	0.10	1
33213-65-9	Endosulfan II	ug/L		ND	0.10	1
72-54-8	4,4'-DDD	ug/L		ND	0.10	1
1031-07-8	Endosulfan sulfate	ug/L		ND	0.10	1
50-29-3	4,4'-DDT	ug/L		ND	0.10	1
72-43-5	Methoxychlor	ug/L		ND	0.50	1
53494-70-5	Endrin ketone	ug/L		ND	0.10	1
7421-93-4	Endrin aldehyde	ug/L		ND	0.10	1
5103-71-9	alpha Chlordane	ug/L		ND	0.05	1
5103-74-2	gamma Chlordane	ug/L		ND	0.05	1
8001-35-2	Toxaphene	ug/L		ND	1.0	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	37.3	(13 - 154%)
Decachlorobiphenyl	38.4	(25 - 140%)

RL = Reporting Limit

Login #L9811111
November 20, 1998 02:12 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811111-01
Client Sample ID: WEIR 110598/COMP
Site/Work ID: PEDRICKTOWN DISPOSAL
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/09/98
Analysis Date: 11/11/98 Time: 16:03

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/05/98

Instrument: HMS3
Analyst: MDC
Lab File ID: L5015

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8270C\3510C
Run ID: R56260
Batch : WG49168

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L		ND	10	2
111-44-4	Bis(2-Chloroethyl)ether	ug/L		ND	10	2
95-57-8	2-Chlorophenol	ug/L		ND	10	2
541-73-1	1,3-Dichlorobenzene	ug/L		ND	10	2
106-46-7	1,4-Dichlorobenzene	ug/L		ND	10	2
95-50-1	1,2-Dichlorobenzene	ug/L		ND	10	2
95-48-7	2-Methylphenol	ug/L		ND	10	2
108-60-1	bis(2-Chloroisopropyl)ether	ug/L		ND	10	2
106-44-5	4-Methylphenol	ug/L		ND	10	2
621-64-7	N-Nitroso-di-n-propylamine	ug/L		ND	10	2
67-72-1	Hexachloroethane	ug/L		ND	10	2
98-95-3	Nitrobenzene	ug/L		ND	10	2
78-59-1	Isophorone	ug/L		ND	10	2
88-75-5	2-Nitrophenol	ug/L		ND	10	2
105-67-9	2,4-Dimethylphenol	ug/L		ND	10	2
111-91-1	Bis(2-Chloroethoxy)Methane	ug/L		ND	10	2
120-83-2	2,4-Dichlorophenol	ug/L		ND	10	2
120-82-1	1,2,4-Trichlorobenzene	ug/L		ND	10	2
91-20-3	Naphthalene	ug/L		ND	10	2
106-47-8	4-Chloroaniline	ug/L		ND	10	2
87-68-3	Hexachlorobutadiene	ug/L		ND	10	2
59-50-7	4-Chloro-3-methylphenol	ug/L		ND	10	2
91-57-6	2-Methylnaphthalene	ug/L		ND	10	2
77-47-4	Hexachlorocyclopentadiene	ug/L		ND	10	2
88-06-2	2,4,6-Trichlorophenol	ug/L		ND	50	2
95-95-4	2,4,5-Trichlorophenol	ug/L		ND	10	2
91-58-7	2-Chloronaphthalene	ug/L		ND	50	2
88-74-4	2-Nitroaniline	ug/L		ND	10	2
131-11-3	Dimethylphthalate	ug/L		ND	10	2
208-96-8	Acenaphthylene	ug/L		ND	10	2
606-20-2	2,6-Dinitrotoluene	ug/L		ND	50	2
99-09-2	3-Nitroaniline	ug/L		ND	10	2
83-32-9	Acenaphthene	ug/L		ND	50	2
51-28-5	2,4-Dinitrophenol	ug/L		ND	50	2
100-02-7	4-Nitrophenol	ug/L		ND	10	2
132-64-9	Dibenzofuran	ug/L		ND	10	2
121-14-2	2,4-Dinitrotoluene	ug/L		ND	10	2
84-66-2	Diethylphthalate	ug/L		ND	10	2
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L		ND	10	2

RL = Reporting Limit

KEMRON ENVIRO[illegible]ENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811111-01
Client Sample ID: WEIR 110598/COMP
Site/Work ID: PEDRICKTOWN DISPOSAL
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/09/98
Analysis Date: 11/11/98 Time: 16:03

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/05/98

Instrument: HMS3
Analyst: MDC
Lab File ID: 15015

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8270C\3510C
Run ID: R56260
Batch : WG49168

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L		ND	10	2
100-01-6	4-Nitroaniline	ug/L		ND	50	2
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	50	2
86-30-6	N-Nitrosodiphenylamine	ug/L		ND	10	2
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	10	2
118-74-1	Hexachlorobenzene	ug/L		ND	10	2
87-86-5	Pentachlorophenol	ug/L		ND	50	2
85-01-8	Phenanthrene	ug/L		ND	10	2
120-12-7	Anthracene	ug/L		ND	10	2
86-74-8	Carbazole	ug/L		ND	10	2
84-74-2	Di-N-Butylphthalate	ug/L		ND	10	2
206-44-0	Fluoranthene	ug/L		ND	10	2
129-00-0	Pyrene	ug/L		ND	10	2
85-68-7	Butylbenzylphthalate	ug/L		ND	10	2
91-94-1	3,3'-Dichlorobenzidine	ug/L		ND	20	2
56-55-3	Benzo(a)anthracene	ug/L		ND	10	2
218-01-9	Chrysene	ug/L		ND	10	2
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	10	2
117-84-0	Di-n-octylphthalate	ug/L		ND	10	2
205-99-2	Benzo(b)fluoranthene	ug/L		ND	10	2
207-08-9	Benzo(k)fluoranthene	ug/L		ND	10	2
50-32-8	Benzo(a)pyrene	ug/L		ND	10	2
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L		ND	10	2
53-70-3	Dibenzo(a,h)Anthracene	ug/L		ND	10	2
191-24-2	Benzo(g,h,i)Perylene	ug/L		ND	10	2

SURROGATES- In Percent Recovery:

2-Fluorophenol	45.4	(21 - 100%)
Phenol-d5	31.2	(10 - 94%)
Nitrobenzene-d5	66.2	(35 - 114%)
2-Fluorobiphenyl	68.0	(43 - 116%)
2,4,6-Tribromophenol	101	(10 - 123%)
p-Terphenyl-d14	91.8	(33 - 141%)

RL = Reporting Limit

Login #L9811111
November 20, 1998 02:12 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811111-01
Client Sample ID: WEIR 110598/COMP
Site/Work ID: PEDRICKTOWN DISPOSAL
Matrix: Water

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/11/98 Time: 15:50

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/05/98

Instrument: HPMS9
Analyst: SLT
Lab File ID: 9VR00242

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8260B
Run ID: R56242
Batch : WG49239

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/L		ND	10	1
74-83-9	Bromomethane	ug/L		ND	10	1
75-01-4	Vinyl chloride	ug/L		ND	10	1
75-00-3	Chloroethane	ug/L		ND	10	1
75-09-2	Methylene chloride	ug/L		ND	5.0	1
67-64-1	Acetone	ug/L		ND	10	1
75-15-0	Carbon disulfide	ug/L		ND	5.0	1
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1
75-34-3	1,1-Dichloroethane	ug/L		ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L		ND	5.0	1
67-66-3	Chloroform	ug/L		ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	1
78-93-3	2-Butanone	ug/L		ND	10	1
71-55-6	1,1,1-Trichloroethane	ug/L		ND	5.0	1
56-23-5	Carbon tetrachloride	ug/L		ND	5.0	1
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	1
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	1
79-01-6	Trichloroethene	ug/L		ND	5.0	1
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1
71-43-2	Benzene	ug/L		ND	5.0	1
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	1
75-25-2	Bromoform	ug/L		ND	5.0	1
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	1
591-78-6	2-Hexanone	ug/L		ND	10	1
127-18-4	Tetrachloroethene	ug/L		ND	5.0	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0	1
108-88-3	Toluene	ug/L		ND	5.0	1
108-90-7	Chlorobenzene	ug/L		ND	5.0	1
100-41-4	Ethyl benzene	ug/L		ND	5.0	1
100-42-5	Styrene	ug/L		ND	5.0	1
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1

SURROGATES- In Percent Recovery:

Dibromofluoromethane	92.0	(86 - 118%)
1,2-Dichloroethane-d4	86.7	(80 - 120%)
Toluene-d8	96.8	(88 - 110%)
p-Bromofluorobenzene	95.1	(86 - 115%)

RL = Reporting Limit

KEMRON ENVI[illegible]MENTAL SERVICES

Lab Sample ID: L9811111-02
Client Sample ID: INLET 110598/GRAB/TOP
Site/Work ID: PEDRICKTOWN DISPOSAL

Matrix: Water
Collected: 11/05/98 1240

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	180000		500	100	N/A	DLN	11/09/98	11:45	160.2

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811111-02
Client Sample ID: INLET 110598/GRAB/TOP
Site/Work ID: PEDRICKTOWN DISPOSAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A

Sample Weight: N/A
Extract Volume: N/A

Date Collected: 11/05/98

% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/09/98
Analysis Date: 11/11/98 Time: 13:03

Instrument: HP10
Analyst: CDB
Lab File ID: 054R0101

Method: 8082/3550
Run ID: R56417
Batch : WG49060

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016.....	ug/L		ND	1.2	2.3
11104-28-2	Aroclor-1221.....	ug/L		ND	1.2	2.3
11141-16-5	Aroclor-1232.....	ug/L		ND	1.2	2.3
53469-21-9	Aroclor-1242.....	ug/L		ND	1.2	2.3
12672-29-6	Aroclor-1248.....	ug/L		ND	1.2	2.3
11097-69-1	Aroclor-1254.....	ug/L		ND	2.3	2.3
11096-82-5	Aroclor-1260.....	ug/L		ND	2.3	2.3

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene.....	47.4	(13 - 154%)
Decachlorobiphenyl.....	49.1	(25 - 140%)

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811111-02
Client Sample ID: INLET 110598/GRAB/TOP
Site/Work ID: PEDRICKTOWN DISPOSAL
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/09/98
Analysis Date: 11/11/98 Time: 16:47

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/05/98

Instrument: HMS3
Analyst: MDC
Lab File ID: 15016

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8270C\3510C
Run ID: R56260
Batch : WG49168

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L		ND	23	4.5
100-01-6	4-Nitroaniline	ug/L		ND	110	4.5
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	110	4.5
86-30-6	N-Nitrosodiphenylamine	ug/L		ND	23	4.5
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	23	4.5
118-74-1	Hexachlorobenzene	ug/L		ND	23	4.5
87-86-5	Pentachlorophenol	ug/L		ND	110	4.5
85-01-8	Phenanthrene	ug/L		ND	23	4.5
120-12-7	Anthracene	ug/L		ND	23	4.5
86-74-8	Carbazole	ug/L		ND	23	4.5
84-74-2	Di-N-Butylphthalate	ug/L		ND	23	4.5
206-44-0	Fluoranthene	ug/L		ND	23	4.5
129-00-0	Pyrene	ug/L		ND	23	4.5
85-68-7	Butylbenzylphthalate	ug/L		ND	23	4.5
91-94-1	3,3'-Dichlorobenzidine	ug/L		ND	45	4.5
56-55-3	Benzo(a)anthracene	ug/L		ND	23	4.5
218-01-9	Chrysene	ug/L		ND	23	4.5
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	23	4.5
117-84-0	Di-n-octylphthalate	ug/L		ND	23	4.5
205-99-2	Benzo(b)fluoranthene	ug/L		ND	23	4.5
207-08-9	Benzo(k)fluoranthene	ug/L		ND	23	4.5
50-32-8	Benzo(a)pyrene	ug/L		ND	23	4.5
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L		ND	23	4.5
53-70-3	Dibenzo(a,h)Anthracene	ug/L		ND	23	4.5
191-24-2	Benzo(g,h,i)Perylene	ug/L		ND	23	4.5

SURROGATES- In Percent Recovery:

2-Fluorophenol	42.5	(21 - 100%)
Phenol-d5	30.0	(10 - 94%)
Nitrobenzene-d5	60.2	(35 - 114%)
2-Fluorobiphenyl	59.8	(43 - 116%)
2,4,6-Tribromophenol	83.6	(10 - 123%)
p-Terphenyl-d14	85.5	(33 - 141%)

RL = Reporting Limit

KEMRON ENVI[illegible]MENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811111-02
Client Sample ID: INLET 110598/GRAB/TOP
Site/Work ID: PEDRICKTOWN DISPOSAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/05/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/11/98 Time: 16:25

Instrument: HPMS9
Analyst: SLT
Lab File ID: 9VR00243

Method: 8260B
Run ID: R56242
Batch : WG49239

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/L		ND	10	1
74-83-9	Bromomethane	ug/L		ND	10	1
75-01-4	Vinyl chloride	ug/L		ND	10	1
75-00-3	Chloroethane	ug/L		ND	10	1
75-09-2	Methylene chloride	ug/L		ND	5.0	1
67-64-1	Acetone	ug/L		ND	10	1
75-15-0	Carbon disulfide	ug/L		ND	5.0	1
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1
75-34-3	1,1-Dichloroethane	ug/L		ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L		ND	5.0	1
67-66-3	Chloroform	ug/L		ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	1
78-93-3	2-Butanone	ug/L		ND	10	1
71-55-6	1,1,1-Trichloroethane	ug/L		ND	5.0	1
56-23-5	Carbon tetrachloride	ug/L		ND	5.0	1
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	1
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	1
79-01-6	Trichloroethene	ug/L		ND	5.0	1
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1
71-43-2	Benzene	ug/L		ND	5.0	1
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	1
75-25-2	Bromoform	ug/L		ND	5.0	1
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	1
591-78-6	2-Hexanone	ug/L		ND	10	1
127-18-4	Tetrachloroethene	ug/L		ND	5.0	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0	1
108-88-3	Toluene	ug/L		ND	5.0	1
108-90-7	Chlorobenzene	ug/L		ND	5.0	1
100-41-4	Ethyl benzene	ug/L		ND	5.0	1
100-42-5	Styrene	ug/L		ND	5.0	1
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1

SURROGATES- In Percent Recovery:

Dibromofluoromethane	94.6	(86 - 118%)
1,2-Dichloroethane-d4	89.3	(80 - 120%)
Toluene-d8	96.4	(88 - 110%)
p-Bromofluorobenzene	95.8	(86 - 115%)

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PCB-S - PCB's (Soil)

Lab Sample ID: L9811111-03
Client Sample ID: INLET 110598/GRAB/BOTTOM
Site/Work ID: PEDRICKTOWN DISPOSAL
Matrix: Soil

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/05/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: 16

TCLP Extract Date: N/A
Extract Date: 11/09/98
Analysis Date: 11/11/98 Time: 13:39

Instrument: HP10
Analyst: CDB
Lab File ID: 055R0101

Method: 8082/3550
Run ID: R56418
Batch : WG49059

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/kg		ND	100	1
11104-28-2	Aroclor-1221	ug/kg		ND	100	1
11141-16-5	Aroclor-1232	ug/kg		ND	100	1
53469-21-9	Aroclor-1242	ug/kg		ND	100	1
12672-29-6	Aroclor-1248	ug/kg		ND	100	1
11097-69-1	Aroclor-1254	ug/kg		ND	210	1
11096-82-5	Aroclor-1260	ug/kg		ND	210	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	72.1	(29 - 133%)
Decachlorobiphenyl	98.8	(30 - 173%)

Lab Sample ID: L9811111-03
Client Sample ID: INLET 110598/GRAB/BOTTOM
Site/Work ID: PEDRICKTOWN DISPOSAL

Matrix: Soil
Collected: 11/05/98 1240

% Solid: 16
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids	% wt.	16		1.0	1	N/A	DIH	11/06/98	12:45	D2216-90

RL = Reporting Limit

KEMRON ENVI[illegible]MENTAL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811111-03
Client Sample ID: INLET 110598/GRAB/BOTTOM
Site/Work ID: PEDRICKTOWN DISPOSAL
Matrix: Soil

TCLP Extract Date: N/A
Extract Date: 11/09/98
Analysis Date: 11/10/98 Time:

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/05/98

Instrument: HP9
Analyst: ECL
Lab File ID: 1288

Sample Weight: N/A
Extract Volume: N/A

% Solid: 16

Method: 8081A\3550B
Run ID: R56132
Batch : WG49090

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/kg		ND	10	1
319-85-7	beta-BHC	ug/kg		ND	10	1
319-86-8	delta-BHC	ug/kg		ND	10	1
58-89-9	gamma-BHC (Lindane)	ug/kg		ND	10	1
76-44-8	Heptachlor	ug/kg		ND	10	1
309-00-2	Aldrin	ug/kg		ND	10	1
1024-57-3	Heptachlor epoxide	ug/kg		ND	10	1
959-98-8	Endosulfan I	ug/kg		ND	10	1
60-57-1	Dieldrin	ug/kg		ND	10	1
72-55-9	4,4'-DDE	ug/kg		ND	21	1
72-20-8	Endrin	ug/kg		ND	21	1
33213-65-9	Endosulfan II	ug/kg		ND	21	1
72-54-8	4,4'-DDD	ug/kg		ND	21	1
1031-07-8	Endosulfan sulfate	ug/kg		ND	21	1
50-29-3	4,4'-DDT	ug/kg		ND	21	1
72-43-5	Methoxychlor	ug/kg		ND	21	1
53494-70-5	Endrin ketone	ug/kg		ND	100	1
7421-93-4	Endrin aldehyde	ug/kg		ND	21	1
5103-71-9	alpha Chlordane	ug/kg		ND	21	1
5103-74-2	gamma Chlordane	ug/kg		ND	10	1
8001-35-2	Toxaphene	ug/kg		ND	10	1
					210	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	61.3	(29 - 133%)
Decachlorobiphenyl	85.9	(30 - 173%)

RL = Reporting Limit

Login #L9811111
November 20, 1998 02:12 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811111-03
Client Sample ID: INLET 110598/GRAB/BOTTOM
Site/Work ID: PEDRICKTOWN DISPOSAL
Matrix: Soil

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/10/98 Time: 18:14

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/05/98

Instrument: HPMS6
Analyst: CMS
Lab File ID: 6VR11352

Sample Weight: N/A
Extract Volume: N/A

% Solid: 16

Method: 8260B
Run ID: R56112
Batch : WG49175

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/kg		ND	63	1
74-83-9	Bromomethane	ug/kg		ND	63	1
75-01-4	Vinyl chloride	ug/kg		ND	63	1
75-00-3	Chloroethane	ug/kg		ND	63	1
75-09-2	Methylene chloride	ug/kg		ND	31	1
67-64-1	Acetone	ug/kg	160		63	1
75-15-0	Carbon disulfide	ug/kg		ND	31	1
75-35-4	1,1-Dichloroethene	ug/kg		ND	31	1
75-34-3	1,1-Dichloroethane	ug/kg		ND	31	1
540-59-0	1,2-Dichloroethene (Total)	ug/kg		ND	31	1
67-66-3	Chloroform	ug/kg		ND	31	1
107-06-2	1,2-Dichloroethane	ug/kg		ND	31	1
78-93-3	2-Butanone	ug/kg		ND	63	1
71-55-6	1,1,1-Trichloroethane	ug/kg		ND	31	1
56-23-5	Carbon tetrachloride	ug/kg		ND	31	1
75-27-4	Bromodichloromethane	ug/kg		ND	31	1
78-87-5	1,2-Dichloropropane	ug/kg		ND	31	1
10061-01-5	cis-1,3-Dichloropropene	ug/kg		ND	31	1
79-01-6	Trichloroethene	ug/kg		ND	31	1
124-48-1	Dibromochloromethane	ug/kg		ND	31	1
79-00-5	1,1,2-Trichloroethane	ug/kg		ND	31	1
71-43-2	Benzene	ug/kg		ND	31	1
10061-02-6	trans-1,3-Dichloropropene	ug/kg		ND	31	1
75-25-2	Bromoform	ug/kg		ND	31	1
108-10-1	4-Methyl-2-pentanone	ug/kg		ND	63	1
591-78-6	2-Hexanone	ug/kg		ND	63	1
127-18-4	Tetrachloroethene	ug/kg		ND	31	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/kg		ND	31	1
108-88-3	Toluene	ug/kg		ND	31	1
108-90-7	Chlorobenzene	ug/kg		ND	31	1
100-41-4	Ethyl benzene	ug/kg		ND	31	1
100-42-5	Styrene	ug/kg		ND	31	1
1330-20-7	Xylenes, Total	ug/kg		ND	31	1

SURROGATES- In Percent Recovery:

Dibromofluoromethane	109	(80 - 120%)
1,2-Dichloroethane-d4	118	(80 - 120%)
Toluene-d8	115	(81 - 117%)
p-Bromofluorobenzene	115	(74 - 121%)

RL = Reporting Limit

Lab Sample ID: L9811111-04
Client Sample ID: MIX 110598
Site/Work ID: PEDRICKTOWN DISPOSAL

Matrix: Water
Collected: 11/05/98 1205

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	25		5.0	1	N/A	DLN	11/09/98	11:45	160.2

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811111-04
Client Sample ID: MIX 110598
Site/Work ID: PEDRICKTOWN DISPOSAL
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/09/98
Analysis Date: 11/10/98 Time: 13:24

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/05/98

Instrument: HP10
Analyst: CDB
Lab File ID: 059R0101

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8082/3550
Run ID: R56138
Batch : WG49060

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016.....	ug/L		ND	0.63	1.25
11104-28-2	Aroclor-1221.....	ug/L		ND	0.63	1.25
11141-16-5	Aroclor-1232.....	ug/L		ND	0.63	1.25
53469-21-9	Aroclor-1242.....	ug/L		ND	0.63	1.25
12672-29-6	Aroclor-1248.....	ug/L		ND	0.63	1.25
11097-69-1	Aroclor-1254.....	ug/L		ND	1.3	1.25
11096-82-5	Aroclor-1260.....	ug/L		ND	1.3	1.25

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene.....	54.0	(13 - 154%)
Decachlorobiphenyl.....	52.8	(25 - 140%)

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811111-04
Client Sample ID: MIX 110598
Site/Work ID: PEDRICKTOWN DISPOSAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/05/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/09/98
Analysis Date: 11/11/98 Time:

Instrument: HP9
Analyst: ECL
Lab File ID: 1293

Method: 8081A\3510C
Run ID: R56303
Batch : WG49091

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L		ND	0.063	1.25
319-85-7	beta-BHC	ug/L		ND	0.063	1.25
319-86-8	delta-BHC	ug/L		ND	0.063	1.25
58-89-9	gamma-BHC (Lindane)	ug/L		ND	0.063	1.25
76-44-8	Heptachlor	ug/L		ND	0.063	1.25
309-00-2	Aldrin	ug/L		ND	0.063	1.25
1024-57-3	Heptachlor epoxide	ug/L		ND	0.063	1.25
959-98-8	Endosulfan I	ug/L		ND	0.063	1.25
60-57-1	Dieldrin	ug/L		ND	0.13	1.25
72-55-9	4,4'-DDE	ug/L		ND	0.13	1.25
72-20-8	Endrin	ug/L		ND	0.13	1.25
33213-65-9	Endosulfan II	ug/L		ND	0.13	1.25
72-54-8	4,4'-DDD	ug/L		ND	0.13	1.25
1031-07-8	Endosulfan sulfate	ug/L		ND	0.13	1.25
50-29-3	4,4'-DDT	ug/L		ND	0.13	1.25
72-43-5	Methoxychlor	ug/L		ND	0.63	1.25
53494-70-5	Endrin ketone	ug/L		ND	0.13	1.25
7421-93-4	Endrin aldehyde	ug/L		ND	0.13	1.25
5103-71-9	alpha Chlordane	ug/L		ND	0.063	1.25
5103-74-2	gamma Chlordane	ug/L		ND	0.063	1.25
8001-35-2	Toxaphene	ug/L		ND	1.3	1.25

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	57.0	(13 - 154%)
Decachlorobiphenyl	59.5	(25 - 140%)

RL = Reporting Limit

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811111-04
Client Sample ID: MIX 110598
Site/Work ID: PEDRICKTOWN DISPOSAL
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/09/98
Analysis Date: 11/11/98 Time: 17:30

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/05/98

Instrument: HMS3
Analyst: MDC
Lab File ID: 15017

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8270C\3510C
Run ID: R56260
Batch : WG49168

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L		ND	12	2.3
111-44-4	Bis(2-Chloroethyl)ether	ug/L		ND	12	2.3
95-57-8	2-Chlorophenol	ug/L		ND	12	2.3
541-73-1	1,3-Dichlorobenzene	ug/L		ND	12	2.3
106-46-7	1,4-Dichlorobenzene	ug/L		ND	12	2.3
95-50-1	1,2-Dichlorobenzene	ug/L		ND	12	2.3
95-48-7	2-Methylphenol	ug/L		ND	12	2.3
108-60-1	bis(2-Chloroisopropyl)ether	ug/L		ND	12	2.3
106-44-5	4-Methylphenol	ug/L		ND	12	2.3
621-64-7	N-Nitroso-di-n-propylamine	ug/L		ND	12	2.3
67-72-1	Hexachloroethane	ug/L		ND	12	2.3
98-95-3	Nitrobenzene	ug/L		ND	12	2.3
78-59-1	Isophorone	ug/L		ND	12	2.3
88-75-5	2-Nitrophenol	ug/L		ND	12	2.3
105-67-9	2,4-Dimethylphenol	ug/L		ND	12	2.3
111-91-1	Bis(2-Chloroethoxy)Methane	ug/L		ND	12	2.3
120-83-2	2,4-Dichlorophenol	ug/L		ND	12	2.3
120-82-1	1,2,4-Trichlorobenzene	ug/L		ND	12	2.3
91-20-3	Naphthalene	ug/L		ND	12	2.3
106-47-8	4-Chloroaniline	ug/L		ND	12	2.3
87-68-3	Hexachlorobutadiene	ug/L		ND	12	2.3
59-50-7	4-Chloro-3-methylphenol	ug/L		ND	12	2.3
91-57-6	2-Methylnaphthalene	ug/L		ND	12	2.3
77-47-4	Hexachlorocyclopentadiene	ug/L		ND	12	2.3
88-06-2	2,4,6-Trichlorophenol	ug/L		ND	12	2.3
95-95-4	2,4,5-Trichlorophenol	ug/L		ND	58	2.3
91-58-7	2-Chloronaphthalene	ug/L		ND	12	2.3
88-74-4	2-Nitroaniline	ug/L		ND	58	2.3
131-11-3	Dimethylphthalate	ug/L		ND	12	2.3
208-96-8	Acenaphthylene	ug/L		ND	12	2.3
606-20-2	2,6-Dinitrotoluene	ug/L		ND	12	2.3
99-09-2	3-Nitroaniline	ug/L		ND	58	2.3
83-32-9	Acenaphthene	ug/L		ND	12	2.3
51-28-5	2,4-Dinitrophenol	ug/L		ND	58	2.3
100-02-7	4-Nitrophenol	ug/L		ND	58	2.3
132-64-9	Dibenzofuran	ug/L		ND	12	2.3
121-14-2	2,4-Dinitrotoluene	ug/L		ND	12	2.3
84-66-2	Diethylphthalate	ug/L		ND	12	2.3
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L		ND	12	2.3

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811111-04
Client Sample ID: MIX 110598
Site/Work ID: PEDRICKTOWN DISPOSAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/05/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/09/98
Analysis Date: 11/11/98 Time: 17:30

Instrument: HMS3
Analyst: MDC
Lab File ID: 15017

Method: 8270C\3510C
Run ID: R56260
Batch : WG49168

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L		ND	12	2.3
100-01-6	4-Nitroaniline	ug/L		ND	58	2.3
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	58	2.3
86-30-6	N-Nitrosodiphenylamine	ug/L		ND	12	2.3
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	12	2.3
118-74-1	Hexachlorobenzene	ug/L		ND	12	2.3
87-86-5	Pentachlorophenol	ug/L		ND	58	2.3
85-01-8	Phenanthrene	ug/L		ND	12	2.3
120-12-7	Anthracene	ug/L		ND	12	2.3
86-74-8	Carbazole	ug/L		ND	12	2.3
84-74-2	Di-N-Butylphthalate	ug/L		ND	12	2.3
206-44-0	Fluoranthene	ug/L		ND	12	2.3
129-00-0	Pyrene	ug/L		ND	12	2.3
85-68-7	Butylbenzylphthalate	ug/L		ND	12	2.3
91-94-1	3,3'-Dichlorobenzidine	ug/L		ND	23	2.3
56-55-3	Benzo(a)anthracene	ug/L		ND	12	2.3
218-01-9	Chrysene	ug/L		ND	12	2.3
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	12	2.3
117-84-0	Di-n-octylphthalate	ug/L		ND	12	2.3
205-99-2	Benzo(b)fluoranthene	ug/L		ND	12	2.3
207-08-9	Benzo(k)fluoranthene	ug/L		ND	12	2.3
50-32-8	Benzo(a)pyrene	ug/L		ND	12	2.3
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L		ND	12	2.3
53-70-3	Dibenzo(a,h)Anthracene	ug/L		ND	12	2.3
191-24-2	Benzo(g,h,i)Perylene	ug/L		ND	12	2.3

SURROGATES- In Percent Recovery:

2-Fluorophenol	52.5	(21 - 100%)
Phenol-d5	35.7	(10 - 94%)
Nitrobenzene-d5	74.5	(35 - 114%)
2-Fluorobiphenyl	77.8	(43 - 116%)
2,4,6-Tribromophenol	87.5	(10 - 123%)
p-Terphenyl-d14	105	(33 - 141%)

RL = Reporting Limit

Login #L[redacted]1111
November [redacted], 1998 02:12 pm

KEMRON ENVI[redacted]MENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811111-04
Client Sample ID: MIX 110598
Site/Work ID: PEDRICKTOWN DISPOSAL
Matrix: Water

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/11/98 Time: 17:01

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/05/98

Instrument: HPMS9
Analyst: SLT
Lab File ID: 9VR00244

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8260B
Run ID: R56242
Batch : WG49239

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/L		ND	10	1
74-83-9	Bromomethane	ug/L		ND	10	1
75-01-4	Vinyl chloride	ug/L		ND	10	1
75-00-3	Chloroethane	ug/L		ND	10	1
75-09-2	Methylene chloride	ug/L		ND	5.0	1
67-64-1	Acetone	ug/L	13		10	1
75-15-0	Carbon disulfide	ug/L		ND	5.0	1
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1
75-34-3	1,1-Dichloroethane	ug/L		ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L		ND	5.0	1
67-66-3	Chloroform	ug/L		ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	1
78-93-3	2-Butanone	ug/L		ND	10	1
71-55-6	1,1,1-Trichloroethane	ug/L		ND	5.0	1
56-23-5	Carbon tetrachloride	ug/L		ND	5.0	1
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	1
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	1
79-01-6	Trichloroethene	ug/L		ND	5.0	1
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1
71-43-2	Benzene	ug/L		ND	5.0	1
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	1
75-25-2	Bromoform	ug/L		ND	5.0	1
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	1
591-78-6	2-Hexanone	ug/L		ND	10	1
127-18-4	Tetrachloroethene	ug/L		ND	5.0	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0	1
108-88-3	Toluene	ug/L		ND	5.0	1
108-90-7	Chlorobenzene	ug/L		ND	5.0	1
100-41-4	Ethyl benzene	ug/L		ND	5.0	1
100-42-5	Styrene	ug/L		ND	5.0	1
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1

SURROGATES- In Percent Recovery:

Dibromofluoromethane	91.5	(86 - 118%)
1,2-Dichloroethane-d4	88.4	(80 - 120%)
Toluene-d8	97.1	(88 - 110%)
p-Bromofluorobenzene	94.5	(86 - 115%)

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9811111-05
Client Sample ID: WEIR 110498
Site/Work ID: PEDRICKTOWN DISPOSAL

Matrix: Water
Collected: 11/04/98 N/A

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	23		5.0	1	N/A	DLN	11/09/98	11:45	160.2

Lab Sample ID: L9811111-06
Client Sample ID: WEIR 110398
Site/Work ID: PEDRICKTOWN DISPOSAL

Matrix: Water
Collected: 11/03/98 N/A

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	20		5.0	1	N/A	DLN	11/09/98	11:45	160.2

RL = Reporting Limit

Order 98-11-111
November 20, 1998 02:12 pm

KEMRON ENVIRONMENTAL SERVICES
WORK GROUPS

Work Group	Run ID	Sample	Dil Type	Matrix	Product	Method	Analyst	Date Collected	Run Date	Run Time	Department
WG48996	R55802	L9811111-03		Soil	Percent Solids	D2216-90	DIH	05-NOV-1998	06-NOV-1998	12:45	Conventionals
WG49010	R56132	L9811111-03		Soil	Organochlorine Pesticides	8081A\3550B	ECL	05-NOV-1998	10-NOV-1998		Extraction
WG49011	R56418	L9811111-03		Soil	PCB's (Soil)	8082/3550	CDB	05-NOV-1998	11-NOV-1998	13:39	Extraction
WG49013	R56302	L9811111-01		Water	Organochlorine Pesticides	8081A\3510C	ECL	05-NOV-1998	10-NOV-1998		Extraction
WG49013	R56302	L9811111-02		Water	Organochlorine Pesticides	8081A\3510C	ECL	05-NOV-1998	10-NOV-1998		Extraction
WG49013	R56303	L9811111-04		Water	Organochlorine Pesticides	8081A\3510C	ECL	05-NOV-1998	11-NOV-1998		Extraction
WG49015	R56138	L9811111-01		Water	PCB's (Water)	8082/3550	CDB	05-NOV-1998	10-NOV-1998	12:48	Extraction
WG49015	R56417	L9811111-02		Water	PCB's (Water)	8082/3550	CDB	05-NOV-1998	11-NOV-1998	13:03	Extraction
WG49015	R56138	L9811111-04		Water	PCB's (Water)	8082/3550	CDB	05-NOV-1998	10-NOV-1998	13:24	Extraction
WG49030	R56260	L9811111-01		Water	TCL Semivolatiles	8270C\3510C	MDC	05-NOV-1998	11-NOV-1998	16:03	Extraction
WG49030	R56260	L9811111-02		Water	TCL Semivolatiles	8270C\3510C	MDC	05-NOV-1998	11-NOV-1998	16:47	Extraction
WG49030	R56260	L9811111-04		Water	TCL Semivolatiles	8270C\3510C	MDC	05-NOV-1998	11-NOV-1998	17:30	Extraction
WG49031	R56167	L9811111-03		Soil	TCL Semivolatiles	8270C\3550B	MLS	05-NOV-1998	11-NOV-1998	15:42	Extraction
WG49059	R56418	L9811111-03		Soil	PCB's (Soil)	8082/3550	CDB	05-NOV-1998	11-NOV-1998	13:39	Semivolatile - GC
WG49060	R56138	L9811111-01		Water	PCB's (Water)	8082/3550	CDB	05-NOV-1998	10-NOV-1998	12:48	Semivolatile - GC
WG49060	R56417	L9811111-02		Water	PCB's (Water)	8082/3550	CDB	05-NOV-1998	11-NOV-1998	13:03	Semivolatile - GC
WG49060	R56138	L9811111-04		Water	PCB's (Water)	8082/3550	CDB	05-NOV-1998	10-NOV-1998	13:24	Semivolatile - GC
WG49090	R56132	L9811111-03		Soil	Organochlorine Pesticides	8081A\3550B	ECL	05-NOV-1998	10-NOV-1998		Semivolatile - GC
WG49091	R56302	L9811111-01		Water	Organochlorine Pesticides	8081A\3510C	ECL	05-NOV-1998	10-NOV-1998		Semivolatile - GC
WG49091	R56302	L9811111-02		Water	Organochlorine Pesticides	8081A\3510C	ECL	05-NOV-1998	10-NOV-1998		Semivolatile - GC
WG49091	R56303	L9811111-04		Water	Organochlorine Pesticides	8081A\3510C	ECL	05-NOV-1998	11-NOV-1998		Semivolatile - GC
WG49125	R56167	L9811111-03		Soil	TCL Semivolatiles	8270C\3550B	MLS	05-NOV-1998	11-NOV-1998	15:42	Semivolatile - GC/MS
WG49168	R56260	L9811111-01		Water	TCL Semivolatiles	8270C\3510C	MDC	05-NOV-1998	11-NOV-1998	16:03	Semivolatile - GC/MS
WG49168	R56260	L9811111-02		Water	TCL Semivolatiles	8270C\3510C	MDC	05-NOV-1998	11-NOV-1998	16:47	Semivolatile - GC/MS
WG49168	R56260	L9811111-04		Water	TCL Semivolatiles	8270C\3510C	MDC	05-NOV-1998	11-NOV-1998	17:30	Semivolatile - GC/MS
WG49172	R56038	L9811111-01		Water	Total Suspended Solids	160.2	DLN	05-NOV-1998	09-NOV-1998	11:45	Conventionals
WG49172	R56038	L9811111-02		Water	Total Suspended Solids	160.2	DLN	05-NOV-1998	09-NOV-1998	11:45	Conventionals
WG49172	R56038	L9811111-04		Water	Total Suspended Solids	160.2	DLN	05-NOV-1998	09-NOV-1998	11:45	Conventionals
WG49172	R56038	L9811111-05		Water	Total Suspended Solids	160.2	DLN	04-NOV-1998	09-NOV-1998	11:45	Conventionals
WG49172	R56038	L9811111-06		Water	Total Suspended Solids	160.2	DLN	03-NOV-1998	09-NOV-1998	11:45	Conventionals
WG49175	R56112	L9811111-03		Soil	TCL Volatiles	8260B	CMS	05-NOV-1998	10-NOV-1998	18:14	Volatile - GC/MS

Order #: 98-11-111
November 20, 1998 02:12 pm

KEMRON ENVIRONMENTAL SERVICES
WORK GROUPS

Work Group	Run ID	Sample	Dil Type	Matrix	Product	Method	Analyst	Date Collected	Run Date	Run Time	Department
WG49239	R56242	L9811111-01		Water	TCL Volatiles	8260B	SLT	05-NOV-1998	11-NOV-1998	15:50	Volatile - GC/MS
WG49239	R56242	L9811111-02		Water	TCL Volatiles	8260B	SLT	05-NOV-1998	11-NOV-1998	16:25	Volatile - GC/MS
WG49239	R56242	L9811111-04		Water	TCL Volatiles	8260B	SLT	05-NOV-1998	11-NOV-1998	17:01	Volatile - GC/MS

KEMRON ANALYST LIST

Ohio Valley Laboratory

10/28/98

ALC - - Ann L. Clark
BAD - - Becky A. Diehl
CEB - - Chad E. Barnes
CDB - - Christy D. Burton
CLH - - Chris L. Hurst
CMS - - Crystal M. Stevens
CRC - - Carla R. Cochran
DIH - - Deanna I. Hesson
DKM - - Dewey K. Miller
DLN - - Deanna L. Norton
DLP - - Dorothy L. Payne
ECL - - Eric C. Lawson
FEH - - Fay E. Harmon
HV - - Hema Vilasagar
JLH - - Janice L. Holland
JWR - - John W. Richards
JYH - - Ji Y. Hu
KHA - - Kim H. Archer
KMS - - Kevin M. Stutler
KRA - - Kathy R. Albertson
MDA - - Mike D. Albertson
MDC - - Michael D. Cochran
MES - - Mary E. Schiling
MLS - - Michael L. Schimmel
MMB - - Maren M. Beery
RDC - - Rebecca D. Cutlip
RDS - - Rebecca D. Sutton
REF - - Ron E. Fertile
REK - - Robert E. Kyer
RSS - - Regina S. Simmons
RWC - - Rodney W. Campbell
SJK - - Sindy J. Kinney
SJM - - Shawn J. Marshall
SLP - - Sheri L. Pfalzgraf
SLT - - Stephanie L. Tepe
SMW - - Shauna M. Welch
SPL - - Steve P. Learn
TJW - - Thomas J. Ware
TRS - - Todd R. Stack
VC - - Vicki Collier
VMN - - Vincent M. Nedeff

KEMRON Environmental Services, Inc.
LIST OF VALID QUALIFIERS (qual)
March 9, 1998

Qualifier	Description
(A)	See the report narrative
(B)	See the report narrative
(C)	See the report narrative
+	Correlation coefficient for the MSA is less than 0.995
<	Less than
>	Greater than
B	Present in the method blank
C	Confirmed by GC/MS
*	Surrogate or spike compound out of range
CG	Confluent growth
D	The analyte was quantified at a secondary dilution factor
DL	Surrogate or spike was diluted out
E	Estimated concentration due to sample matrix interference
F	Present below nominal reporting limit (AFCEE only)
FL	Free liquid
I	Semiquantitative result, out of instrument calibration range
J	Present below nominal reporting limit
L	Sample reporting limits elevated due to matrix interference
M	Duplicate injection precision not met

Qualifier	Description
N	Tentatively Identified Compound (TIC)
NA	Not applicable
ND	Not detected at or above the reporting limit (RL)
NF	Not found
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentration > 25% difference between the two GC columns
QNS	Quantity not sufficient to perform analysis
R	Analyte exceeds regulatory limit
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TNTC	Too numerous to count
U	Analyzed for but not detected
W	Post-digestion spike for furnace AA out of control limits
X	Can not be resolved from isomer. See below.

Special Notes for Organic Analytes

1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

INORGANIC QA/QC

Kemron
ENVIRONMENTAL SERVICES

KEMRON ENVIRONMENTAL SERVICES
OHIO VALLEY LABORATORY
QUALITY CONTROL SUMMARY

WORKGROUP: wg49172
METHOD: 160.2
MATRIX: Water
UNITS: mg/L

RUN DATE: 11/9/98
ANALYST: dlp
DUPLICATE: 11-111-02

ANALYTE	RDL	Blank	T-LCS	LCS	REP1	REP2	SAMPLE RESULT	T-MS	MS	PERCENT RECOVERY LCS	LCS LCL	LCS UCL	MS	MS LCL	MS UCL	PERCENT RPD REP RPD	RPD UCL
TSS	5.00	ND	50.00	50.00	177000.00	178000.00	NR	NR	NR	100.0	81.0	114.5	NR	NR	NR	0.56	20.00

NOTES & DEFINITIONS :

RDL = REPORTING DETECTION LIMIT
DL = DILUTED OUT
NA = NOT APPLICABLE
ND = NOT DETECTED
NR = NOT REQUIRED

LCS = LABORATORY CONTROL SAMPLE
T- LCS = TRUE VALUE OF LCS
REP1 = UNSPIKED SAMPLE REPLICATE 1
REP2 = UNSPIKED SAMPLE REPLICATE 2
SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX
T-MS = TRUE VALUE OF MATRIX SPIKE
MS = MATRIX SPIKE
LCL = LOWER CONTROL LIMIT
UCL = UPPER CONTROL LIMIT

REP RPD = RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES

ORGANIC QA/QC

KEMRON
ENVIRONMENTAL SERVICES

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49175	Run Date:	11/10/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_6	SMPL Num:	11-132-01	SMPL DF:	1
Matrix:	Soil	BLK FLNM:	6BK11340	SMPL FLNM:	6BR11342	MS DF:	1
Units:	ug/kg	BLK2 FLNM:	NA	MS FLNM:	6BR11343.D	MSD DF:	1
		LCS FLNM:	6QC11341.D	MSD FLNM:	6BR11344.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
				LCS Spike						MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	%	%	%	%	%	%	%	%	%	%
dichlorodifluoromethane	10.0	ND	ND	17.5	NA	20.0	ND	15.4	17.3	20.0	87.3	NA	46.0	152.0	77.1	86.5	46.0	152.0	11.6	20.0
chloromethane	10.0	ND	ND	20.0	NA	20.0	ND	17.6	19.1	20.0	99.8	NA	64.0	140.0	87.8	95.7	64.0	140.0	8.6	20.0
vinyl chloride	10.0	ND	ND	23.5	NA	20.0	ND	20.8	21.3	20.0	117.7	NA	70.0	137.0	104.1	106.3	70.0	137.0	2.1	20.0
bromomethane	10.0	ND	ND	25.2	NA	20.0	ND	21.9	21.5	20.0	126.1	NA	62.0	147.0	109.5	107.5	62.0	147.0	1.8	20.0
chloroethane	10.0	ND	ND	23.2	NA	20.0	ND	20.1	21.0	20.0	116.1	NA	69.0	136.0	100.6	105.2	69.0	136.0	4.5	20.0
trichlorofluoromethane	10.0	ND	ND	21.0	NA	20.0	ND	17.4	19.2	20.0	105.1	NA	70.0	134.0	87.2	95.8	70.0	134.0	9.5	20.0
freon 113	10.0	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	20.0
acetone	100.0	3.2	ND	22.5	NA	20.0	4.8	21.0	24.3	20.0	112.4	NA	14.0	171.0	80.7	97.4	14.0	171.0	14.7	20.0
1,1-dichloroethene	5.0	ND	ND	19.3	NA	20.0	ND	15.1	16.6	20.0	96.4	NA	70.0	140.0	75.6	82.9	70.0	140.0	9.2	20.0
iodomethane	10.0	ND	ND	18.5	NA	20.0	ND	13.7	15.2	20.0	92.6	NA	50.0	150.0	68.7	75.9	50.0	150.0	10.0	20.0
methylene chloride	5.0	3.0	ND	19.9	NA	20.0	4.4	19.9	21.6	20.0	99.5	NA	57.0	146.0	77.5	86.0	57.0	146.0	8.2	20.0
carbon disulfide	5.0	ND	ND	21.3	NA	20.0	ND	15.1	16.1	20.0	106.3	NA	69.0	125.0	75.5	80.3	69.0	125.0	6.2	20.0
acrylonitrile	100.0	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	20.0
trans-1,2-dichloroethene	5.0	ND	ND	21.8	NA	20.0	ND	16.3	17.0	20.0	109.2	NA	75.0	141.0	81.5	85.1	75.0	141.0	4.3	20.0
vinyl acetate	10.0	ND	ND	21.2	NA	20.0	ND	0.0	0.0	20.0	106.2	NA	D	132.0	0.0	0.0	D	132.0	0.0	20.0
1,1-dichloroethane	5.0	ND	ND	21.1	NA	20.0	ND	16.6	17.3	20.0	105.3	NA	79.0	125.0	82.8	86.7	79.0	125.0	4.7	20.0
2-butanone	100.0	ND	ND	19.1	NA	20.0	ND	15.1	15.8	20.0	95.7	NA	28.0	173.0	75.5	78.9	28.0	173.0	4.3	20.0
2,2-dichloropropane	5.0	ND	ND	19.6	NA	20.0	ND	16.0	17.7	20.0	98.2	NA	69.0	128.0	80.1	88.3	69.0	128.0	9.7	20.0
cis-1,2-dichloroethene	5.0	ND	ND	20.1	NA	20.0	ND	14.6	14.7	20.0	100.5	NA	75.0	125.0	73.1	73.6	75.0	125.0	0.7	20.0
chloroform	5.0	ND	ND	21.2	NA	20.0	ND	16.6	16.9	20.0	106.0	NA	78.0	124.0	83.8	84.4	78.0	124.0	0.8	20.0

Notes and Definitions:

RDL= Reporting Detection Limit
BLK= Method Blank
BLK2= Second Method Blank
LCS= Laboratory Control Sample
LCS2= Second Laboratory Control Sample
SMPL= Sample Results
MS/MSD= Matrix Spike / Matrix Spike Duplicate
LCL= Lower Control Limit
UCL= Upper Control Limit
RPD= Relative Percent Difference

ND= Not Detected
NA= Not Applicable

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49175	Run Date:	11/10/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_6	SMPL Num:	11-132-01	SMPL DF:	1
Matrix:	Soil	BLK FLNM:	6BK11340	SMPL FLNM:	6BR11342	MS DF:	1
Units:	ug/kg	BLK2 FLNM:	NA	MS FLNM:	6BR11343.D	MSD DF:	1
		LCS FLNM:	6QC11341.D	MSD FLNM:	6BR11344.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
	RDL	BLK	BLK2	LCS	LCS2	LCS Spike Level	SMPL	MS	MSD	MS Spike Level	LCS	LCS2	LCS LCL	LCS UCL	MS	MSD	MS LCL	MS UCL	MS RPD	RPD UCL
Target Analytes	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	%	%	%	%	%	%	%	%	%	%
bromochloromethane	5.0	ND	ND	20.6	NA	20.0	ND	16.2	15.8	20.0	103.1	NA	78.0	125.0	81.2	78.8	78.0	125.0	3.1	20.0
1,1,1-trichloroethane	5.0	ND	ND	20.4	NA	20.0	ND	15.7	17.1	20.0	101.8	NA	77.0	124.0	78.4	85.3	77.0	124.0	8.4	20.0
1,1-dichloropropene	5.0	ND	ND	20.0	NA	20.0	ND	12.9	13.5	20.0	99.9	NA	85.0	132.0	64.5	67.5	85.0	132.0	4.5	20.0
carbon tetrachloride	5.0	ND	ND	20.8	NA	20.0	ND	15.1	16.2	20.0	104.1	NA	77.0	126.0	75.4	80.8	77.0	126.0	7.0	20.0
1,2-dichloroethane	5.0	ND	ND	20.7	NA	20.0	ND	16.2	15.5	20.0	103.7	NA	75.0	126.0	80.9	77.5	75.0	126.0	4.3	20.0
benzene	5.0	ND	ND	21.3	NA	20.0	1.2	17.4	18.4	20.0	106.3	NA	81.0	122.0	81.0	86.0	81.0	122.0	5.8	20.0
trichloroethene	5.0	ND	ND	19.7	NA	20.0	ND	12.4	12.5	20.0	98.6	NA	81.0	123.0	61.9	62.6	81.0	123.0	1.1	20.0
1,2-dichloropropane	5.0	ND	ND	19.8	NA	20.0	ND	15.2	15.3	20.0	99.0	NA	79.0	125.0	76.0	76.8	79.0	125.0	0.7	20.0
bromodichloromethane	5.0	ND	ND	21.5	NA	20.0	ND	15.3	14.5	20.0	107.4	NA	81.0	123.0	76.7	72.5	81.0	123.0	5.6	20.0
dibromomethane	5.0	ND	ND	20.6	NA	20.0	ND	14.8	13.5	20.0	103.0	NA	80.0	128.0	73.9	67.6	80.0	126.0	9.0	20.0
2-chloroethylvinyl-ether	5.0	ND	ND	25.8	NA	20.0	ND	28.1	24.6	20.0	128.9	NA	50.0	151.0	140.7	123.0	50.0	151.0	13.4	20.0
4-methyl-2-pentanone	10.0	ND	ND	16.4	NA	20.0	ND	12.2	11.3	20.0	82.1	NA	38.0	162.0	60.8	56.7	38.0	162.0	7.0	20.0
cis-1,3-dichloropropene	5.0	ND	ND	20.7	NA	20.0	ND	12.7	10.6	20.0	103.3	NA	81.0	124.0	63.5	53.0	81.0	124.0	18.0	20.0
toluene	5.0	ND	ND	22.5	NA	20.0	1.8	17.9	17.0	20.0	112.3	NA	80.0	124.0	80.7	76.3	80.0	124.0	5.0	20.0
trans-1,3-dichloropropene	5.0	ND	ND	20.7	NA	20.0	ND	13.1	9.8	20.0	103.7	NA	80.0	122.0	65.7	49.2	80.0	122.0	28.8	20.0
1,1,2-trichloroethane	5.0	ND	ND	22.6	NA	20.0	ND	17.2	14.5	20.0	113.1	NA	79.0	123.0	85.9	72.5	79.0	123.0	16.9	20.0
2-hexanone	10.0	ND	ND	16.1	NA	20.0	ND	10.9	7.0	20.0	80.8	NA	31.0	149.0	54.4	35.1	31.0	149.0	43.3	20.0
1,3-dichloropropane	5.0	ND	ND	21.5	NA	20.0	ND	15.6	13.5	20.0	107.4	NA	79.0	123.0	78.1	67.4	79.0	123.0	14.7	20.0
tetrachloroethene	5.0	ND	ND	21.0	NA	20.0	ND	12.9	12.2	20.0	105.0	NA	80.0	122.0	64.6	60.9	80.0	122.0	6.0	20.0
dibromochloromethane	5.0	ND	ND	21.6	NA	20.0	ND	15.0	12.4	20.0	108.2	NA	81.0	122.0	74.9	61.8	81.0	122.0	19.2	20.0

Notes and Definitions:

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LCL= Lower Control Limit
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ND= Not Detected
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KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49175	Run Date:	11/10/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_6	SMPL Num:	11-132-01	SMPL DF:	1
Matrix:	Soil	BLK FLNM:	6BK11340	SMPL FLNM:	6BR11342	MS DF:	1
Units:	ug/kg	BLK2 FLNM:	NA	MS FLNM:	6BR11343.D	MSD DF:	1
		LCS FLNM:	6QC11341.D	MSD FLNM:	6BR11344.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
	RDL	BLK	BLK2	LCS	LCS2	LCS Spike Level	SMPL	MS	MSD	MS Spike Level	LCS	LCS2	LCS LCL	LCS UCL	MS	MSD	MS LCL	MS UCL	MS RPD	RPD UCL
Target Analytes	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	%	%	%	%	%	%	%	%	%	%
1,2-dibromoethane	5.0	ND	ND	20.8	NA	20.0	ND	14.3	11.4	20.0	104.2	NA	79.0	125.0	71.4	56.8	79.0	125.0	22.8	20.0
chlorobenzene	5.0	0.2	ND	21.4	NA	20.0	0.2	11.9	9.2	20.0	107.1	NA	82.0	124.0	58.6	44.8	82.0	124.0	26.1	20.0
1,1,1,2-tetrachloroethane	5.0	ND	ND	21.9	NA	20.0	ND	15.3	13.8	20.0	109.4	NA	80.0	124.0	76.7	68.9	80.0	124.0	10.8	20.0
ethylbenzene	5.0	ND	ND	21.9	NA	20.0	0.4	13.9	12.4	20.0	109.4	NA	78.0	127.0	67.8	59.7	78.0	127.0	12.1	20.0
m+p-xylene	5.0	ND	ND	44.4	NA	40.0	0.7	26.6	23.0	40.0	111.1	NA	81.0	124.0	64.7	55.6	81.0	124.0	14.6	20.0
o-xylene	5.0	ND	ND	21.6	NA	20.0	0.3	13.5	11.2	20.0	108.0	NA	83.0	124.0	66.0	54.6	83.0	124.0	18.5	20.0
styrene	5.0	ND	ND	22.7	NA	20.0	ND	10.6	7.0	20.0	113.4	NA	80.0	122.0	53.2	35.1	80.0	122.0	41.1	20.0
bromoform	5.0	ND	ND	20.7	NA	20.0	ND	11.3	8.7	20.0	103.4	NA	67.0	134.0	56.5	43.5	67.0	134.0	26.0	20.0
isopropylbenzene	5.0	ND	ND	21.7	NA	20.0	ND	11.4	10.0	20.0	108.6	NA	82.0	124.0	57.0	50.2	82.0	124.0	12.7	20.0
1,1,2,2-tetrachloroethane	5.0	ND	ND	22.1	NA	20.0	ND	16.6	12.5	20.0	110.3	NA	71.0	136.0	83.2	62.7	71.0	136.0	28.0	20.0
1,2,3-trichloropropane	5.0	ND	ND	22.0	NA	20.0	ND	18.2	13.8	20.0	109.8	NA	70.0	139.0	91.0	69.0	70.0	139.0	27.5	20.0
trans-1,4-dichloro-2-butene	5.0	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
propyl-benzene	5.0	ND	ND	20.8	NA	20.0	ND	13.2	10.1	20.0	103.8	NA	79.0	124.0	65.8	50.4	79.0	124.0	26.5	20.0
bromobenzene	5.0	ND	ND	20.0	NA	20.0	ND	11.4	7.1	20.0	100.1	NA	80.0	122.0	56.8	35.7	80.0	122.0	45.5	20.0
1,3,5-trimethylbenzene	5.0	ND	ND	21.3	NA	20.0	0.1	13.5	10.2	20.0	106.4	NA	82.0	123.0	66.7	50.2	82.0	123.0	27.9	20.0
2-chlorotoluene	5.0	ND	ND	21.7	NA	20.0	ND	12.3	8.7	20.0	108.3	NA	77.0	126.0	61.4	43.4	77.0	126.0	34.4	20.0
4-chlorotoluene	5.0	ND	ND	21.7	NA	20.0	ND	11.4	7.1	20.0	108.3	NA	80.0	124.0	56.8	35.4	80.0	124.0	46.5	20.0
tert-butyl-benzene	5.0	ND	ND	19.5	NA	20.0	ND	12.4	10.4	20.0	97.6	NA	78.0	122.0	62.0	51.9	78.0	122.0	17.7	20.0
1,2,4-trimethylbenzene	5.0	ND	ND	20.9	NA	20.0	0.4	13.1	9.6	20.0	104.6	NA	83.0	123.0	63.6	46.0	83.0	123.0	31.0	20.0
sec-butyl-benzene	5.0	ND	ND	20.5	NA	20.0	ND	11.6	9.2	20.0	102.4	NA	80.0	124.0	57.9	46.2	80.0	124.0	22.4	20.0

Notes and Definitions:

RDL= Reporting Detection Limit

ND= *Not Detected*

BLK= Method Blank

NA= Not Applicable

BLK2= Second Method Blank

LCS= Laboratory Control Sample

LCS2= Second Laboratory Control Sample

SMPL= Sample Results

MS/MSD= Matrix Spike / Matrix Spike Duplicate

LCL= Lower Control Limit

UCL= Upper Control Limit

RPD= Relative Percent Difference

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49175	Run Date:	11/10/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_6	SMPL Num:	11-132-01	SMPL DF:	1
Matrix:	Soil	BLK FLNM:	6BK11340	SMPL FLNM:	6BR11342	MS DF:	1
Units:	ug/kg	BLK2 FLNM:	NA	MS FLNM:	6BR11343.D	MSD DF:	1
		LCS FLNM:	6QC11341.D	MSD FLNM:	6BR11344.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
	RDL	BLK	BLK2	LCS	LCS2	LCS Spike Level	SMPL	MS	MSD	MS Spike Level	LCS	LCS2	LCS LCL	LCS UCL	MS	MSD	MS LCL	MS UCL	MS RPD	RPD UCL
Target Analytes	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	%	%	%	%	%	%	%	%	%	%
p-isopropyl-toluene	5.0	ND	ND	19.7	NA	20.0	ND	11.3	8.7	20.0	98.6	NA	77.0	124.0	56.5	43.5	77.0	124.0	25.9	20.0
1,3-dichlorobenzene	5.0	ND	ND	21.0	NA	20.0	ND	9.3	5.4	20.0	105.0	NA	82.0	120.0	46.3	26.8	82.0	120.0	53.5	20.0
1,4-dichlorobenzene	5.0	0.2	ND	20.5	NA	20.0	ND	8.9	4.9	20.0	102.7	NA	81.0	121.0	44.6	24.6	81.0	121.0	57.9	20.0
n-butyl-benzene	5.0	ND	ND	20.5	NA	20.0	ND	10.3	7.0	20.0	102.3	NA	81.0	125.0	51.4	35.1	81.0	125.0	37.8	20.0
1,2-dichlorobenzene	5.0	ND	ND	20.7	NA	20.0	ND	8.9	5.0	20.0	103.3	NA	84.0	122.0	44.7	24.9	84.0	122.0	57.0	20.0
2-dibromo-3-chloropropan	5.0	ND	ND	18.6	NA	20.0	ND	11.3	7.7	20.0	93.0	NA	55.0	155.0	56.5	38.6	55.0	155.0	37.6	20.0
1,2,4-trichlorobenzene	5.0	ND	ND	18.6	NA	20.0	ND	4.6	2.2	20.0	93.2	NA	78.0	124.0	22.9	10.9	78.0	124.0	71.2	20.0
hexachlorobutadiene	5.0	ND	ND	18.6	NA	20.0	ND	8.2	5.4	20.0	92.8	NA	73.0	127.0	41.2	27.0	73.0	127.0	41.6	20.0
napthalene	10.0	ND	ND	18.5	NA	20.0	1.72	5.5	3.3	20.0	92.4	NA	56.0	152.0	18.7	7.8	56.0	152.0	49.9	20.0
1,2,3-trichlorobenzene	5.0	ND	ND	19.0	NA	20.0	ND	4.4	2.2	20.0	94.8	NA	76.0	128.0	21.9	10.9	76.0	128.0	67.3	20.0

BLK2= Second Method Blank
LCS= Laboratory Control Sample
LCS2= Second Laboratory Control Sample
SMPL= Sample Results
MS/MSD= Matrix Spike / Matrix Spike Duplicate
LCL= Lower Control Limit
UCL= Upper Control Limit
RPD= Relative Percent Difference

ND= Not Detected
NA= Not Applicable
RDL= Reporting Detection Limit
BLK= Method Blank

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49239	Run Date:	11/11/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_9	SMPL Num:	11-119-05	SMPL DF:	1
Matrix:	Water	BLK FLNM:	9BK00234	SMPL FLNM:	9VR00239	MS DF:	1
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	9VR00240	MSD DF:	1
		LCS FLNM:	9QC00235	MSD FLNM:	9VR00241		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
				LCS Spike						MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
dichlorodifluoromethane	10.0	ND	ND	15.5	NA	20.0	ND	16.5	18.5	20.0	77.5	NA	36.0	148.0	82.5	92.5	60.0	140.0	11.4	20.0
chloromethane	10.0	ND	ND	16.0	NA	20.0	ND	16.3	17.2	20.0	80.0	NA	56.0	132.0	81.5	86.0	D	273.0	5.4	20.0
vinyl chloride	10.0	ND	ND	16.3	NA	20.0	ND	19.1	20.2	20.0	81.5	NA	68.0	125.0	95.5	101.0	D	251.0	5.6	20.0
bromomethane	10.0	ND	ND	23.5	NA	20.0	ND	24.4	24.5	20.0	117.5	NA	55.0	138.0	122.0	122.5	D	242.0	0.4	20.0
chloroethane	10.0	ND	ND	19.0	NA	20.0	ND	19.3	19.0	20.0	95.0	NA	57.0	128.0	96.5	95.0	14.0	230.0	1.6	20.0
trichlorofluoromethane	10.0	ND	ND	19.3	NA	20.0	ND	21.4	20.1	20.0	96.5	NA	70.0	127.0	107.0	100.5	17.0	181.0	6.3	20.0
freon 113	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	70.0	130.0	NA	20.0
acetone	100.0	ND	ND	21.8	NA	20.0	ND	21.3	22.6	20.0	109.0	NA	44.0	114.0	106.5	113.0	70.0	130.0	5.9	20.0
1,1-dichloroethene	5.0	ND	ND	19.9	NA	20.0	ND	21.6	20.9	20.0	99.5	NA	69.0	144.0	108.0	104.5	D	234.0	3.3	20.0
iodomethane	NTC	ND	ND	16.2	NA	20.0	ND	17.0	17.9	20.0	81.0	NA	NA	NA	85.0	89.5	70.0	130.0	5.2	20.0
methylene chloride	5.0	ND	ND	21.9	NA	20.0	ND	20.5	20.2	20.0	109.5	NA	71.0	128.0	102.5	101.0	D	221.0	1.5	20.0
carbon disulfide	5.0	ND	ND	18.9	NA	20.0	ND	20.2	19.5	20.0	94.5	NA	67.0	136.0	101.0	97.5	70.0	130.0	3.5	20.0
acrylonitrile	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	70.0	130.0	NA	20.0
trans-1,2-dichloroethene	5.0	ND	ND	21.8	NA	20.0	ND	23.2	21.9	20.0	109.0	NA	85.0	133.0	116.0	109.5	54.0	156.0	5.8	20.0
vinyl acetate	10.0	ND	ND	20.5	NA	20.0	ND	25.3	26.2	20.0	102.5	NA	9.0	236.0	126.5	131.0	9.0	236.0	3.5	20.0
1,1-dichloroethane	5.0	ND	ND	21.0	NA	20.0	ND	21.7	20.8	20.0	105.0	NA	82.0	124.0	108.5	104.0	59.0	155.0	4.2	20.0
2-butanone	100.0	ND	ND	21.6	NA	20.0	ND	18.9	19.2	20.0	108.0	NA	43.0	140.0	94.5	96.0	70.0	130.0	1.6	20.0
2,2-dichloropropane	5.0	ND	ND	18.9	NA	20.0	ND	20.1	19.3	20.0	94.5	NA	77.0	126.0	100.5	96.5	60.0	140.0	4.1	20.0
cis-1,2-dichloroethene	5.0	ND	ND	20.3	NA	20.0	ND	21.1	20.3	20.0	101.5	NA	69.0	130.0	105.5	101.5	60.0	140.0	3.9	20.0
chloroform	5.0	ND	ND	21.3	NA	20.0	1.7	22.7	22.4	20.0	106.5	NA	83.0	121.0	105.0	103.5	51.0	138.0	1.3	20.0

Notes and Definitions:

RDL = Reporting Detection Limit
BLK = Method Blank
BLK2 = Second Method Blank
LCS = Laboratory Control Sample
LCS2 = Second Laboratory Control Sample
SMPL = Sample Results
MS/MSD = Matrix Spike / Matrix Spike Duplicate
LCL = Lower Control Limit
UCL = Upper Control Limit
RPD = Relative Percent Difference

ND = Not Detected
NA = Not Applicable

K[illegible]ON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49239	Run Date:	11/11/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_9	SMPL Num:	11-119-05	SMPL DF:	1
Matrix:	Water	BLK FLNM:	9BK00234	SMPL FLNM:	9VR00239	MS DF:	1
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	9VR00240	MSD DF:	1
		LCS FLNM:	9QC00235	MSD FLNM:	9VR00241		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
	RDL	BLK	BLK2	LCS	LCS2	LCS Spike Level	SMPL	MS	MSD	MS Spike Level	LCS	LCS2	LCS LCL	LCS UCL	MS	MSD	MS LCL	MS UCL	MS RPD	RPD UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
bromochloromethane	5.0	ND	ND	22.5	NA	20.0	ND	22.1	21.7	20.0	112.5	NA	85.0	118.0	110.5	108.5	60.0	140.0	1.8	20.0
1,1,1-trichloroethane	5.0	ND	ND	19.9	NA	20.0	ND	21.3	20.5	20.0	99.5	NA	74.0	125.0	106.5	102.5	52.0	162.0	3.8	20.0
1,1-dichloropropene	5.0	ND	ND	20.9	NA	20.0	ND	22.8	22.2	20.0	104.5	NA	85.0	126.0	114.0	111.0	60.0	140.0	2.7	20.0
carbon tetrachloride	5.0	ND	ND	20.1	NA	20.0	ND	22.0	21.2	20.0	100.5	NA	73.0	129.0	110.0	106.0	70.0	140.0	3.7	20.0
1,2-dichloroethane	5.0	ND	ND	21.0	NA	20.0	ND	21.6	21.3	20.0	105.0	NA	76.0	123.0	108.0	106.5	49.0	155.0	1.4	20.0
benzene	5.0	ND	ND	20.5	NA	20.0	ND	20.7	20.4	20.0	102.5	NA	86.0	118.0	103.5	102.0	37.0	151.0	1.5	20.0
trichloroethene	5.0	ND	ND	20.8	NA	20.0	12.1	32.0	31.8	20.0	104.0	NA	82.0	120.0	99.5	98.5	71.0	157.0	0.6	20.0
1,2-dichloropropane	5.0	ND	ND	20.6	NA	20.0	ND	20.5	20.5	20.0	103.0	NA	74.0	126.0	102.5	102.5	D	210.0	0.0	20.0
bromodichloromethane	5.0	ND	ND	21.7	NA	20.0	ND	22.3	21.7	20.0	108.5	NA	74.0	126.0	111.5	108.5	35.0	155.0	2.7	20.0
dibromomethane	5.0	ND	ND	21.3	NA	20.0	ND	21.0	21.9	20.0	106.5	NA	78.0	125.0	105.0	109.5	60.0	140.0	4.2	20.0
2-chloroethylvinyl-ether	10.0	ND	ND	17.1	NA	20.0	ND	ND	ND	20.0	85.5	NA	50.0	151.0	NA	NA	70.0	130.0	ND	20.0
4-methyl-2-pentanone	10.0	ND	ND	18.9	NA	20.0	ND	18.7	19.5	20.0	94.5	NA	79.0	127.0	93.5	97.5	70.0	130.0	4.2	20.0
cis-1,3-dichloropropene	5.0	ND	ND	21.7	NA	20.0	ND	21.9	21.7	20.0	108.5	NA	77.0	123.0	109.5	108.5	D	227.0	0.9	20.0
toluene	5.0	ND	ND	20.5	NA	20.0	ND	20.7	20.4	20.0	102.5	NA	83.0	119.0	103.5	102.0	47.0	150.0	1.5	20.0
trans-1,3-dichloropropene	5.0	ND	ND	18.9	NA	20.0	ND	18.9	18.7	20.0	94.5	NA	74.0	124.0	94.5	93.5	17.0	183.0	1.1	20.0
1,1,2-trichloroethane	5.0	ND	ND	20.2	NA	20.0	ND	19.7	20.0	20.0	101.0	NA	72.0	119.0	98.5	100.0	52.0	150.0	1.5	20.0
2-hexanone	10.0	ND	ND	18.7	NA	20.0	ND	18.7	19.8	20.0	93.5	NA	55.0	114.0	93.5	99.0	70.0	130.0	5.7	20.0
1,3-dichloropropane	5.0	ND	ND	20.6	NA	20.0	ND	20.0	20.2	20.0	103.0	NA	73.0	122.0	100.0	101.0	60.0	140.0	1.0	20.0
tetrachloroethene	5.0	ND	ND	19.8	NA	20.0	ND	20.9	20.5	20.0	99.0	NA	82.0	120.0	104.5	102.5	64.0	148.0	1.9	20.0
dibromochloromethane	5.0	ND	ND	18.8	NA	20.0	ND	18.4	18.3	20.0	94.0	NA	72.0	121.0	92.0	91.5	53.0	149.0	0.5	20.0

Notes and Definitions:

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KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49239	Run Date:	11/11/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_9	SMPL Num:	11-119-05	SMPL DF:	1
Matrix:	Water	BLK FLNM:	9BK00234	SMPL FLNM:	9VR00239	MS DF:	1
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	9VR00240	MSD DF:	1
		LCS FLNM:	9QC00235	MSD FLNM:	9VR00241		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
1,2-dibromoethane	5.0	ND	ND	20.8	NA	20.0	ND	20.8	21.0	20.0	104.0	NA	75.0	121.0	104.0	105.0	60.0	140.0	1.0	20.0
chlorobenzene	5.0	ND	ND	20.4	NA	20.0	ND	20.5	20.6	20.0	102.0	NA	83.0	120.0	102.5	103.0	37.0	160.0	0.5	20.0
1,1,1,2-tetrachloroethane	5.0	ND	ND	20.1	NA	20.0	ND	20.5	20.5	20.0	100.5	NA	79.0	118.0	102.5	102.5	60.0	140.0	0.0	20.0
ethylbenzene	5.0	ND	ND	19.4	NA	20.0	ND	21.0	20.3	20.0	97.0	NA	82.0	119.0	105.0	101.5	37.0	162.0	3.4	20.0
m + p-xylene	5.0	ND	ND	39.7	NA	40.0	ND	41.7	40.6	40.0	99.3	NA	81.0	121.0	104.3	101.5	60.0	140.0	2.7	20.0
o-xylene	5.0	ND	ND	20.4	NA	20.0	ND	21.1	20.6	20.0	102.0	NA	81.0	198.0	105.5	103.0	60.0	140.0	2.4	20.0
styrene	5.0	ND	ND	21.2	NA	20.0	ND	21.3	21.2	20.0	106.0	NA	81.0	118.0	106.5	106.0	60.0	140.0	0.5	20.0
bromoform	5.0	ND	ND	17.5	NA	20.0	ND	17.3	17.2	20.0	87.5	NA	68.0	129.0	86.5	86.0	45.0	169.0	0.6	20.0
isopropylbenzene	5.0	ND	ND	20.1	NA	20.0	ND	21.3	20.8	20.0	100.5	NA	81.0	121.0	106.5	104.0	60.0	140.0	2.4	20.0
1,1,2,2-tetrachloroethane	5.0	ND	ND	20.4	NA	20.0	ND	21.0	21.5	20.0	102.0	NA	61.0	137.0	105.0	107.5	46.0	157.0	2.4	20.0
1,2,3-trichloropropane	5.0	ND	ND	20.6	NA	20.0	ND	21.0	21.9	20.0	103.0	NA	72.0	130.0	105.0	109.5	60.0	140.0	4.2	20.0
trans-1,4-dichloro-2-butene	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	20.0
propyl-benzene	5.0	ND	ND	19.5	NA	20.0	ND	20.7	20.4	20.0	97.5	NA	69.0	135.0	103.5	102.0	60.0	140.0	1.5	20.0
bromobenzene	5.0	ND	ND	20.8	NA	20.0	ND	21.0	20.8	20.0	104.0	NA	86.0	118.0	105.0	104.0	60.0	140.0	1.0	20.0
1,3,5-trimethylbenzene	5.0	ND	ND	20.3	NA	20.0	ND	21.0	20.6	20.0	101.5	NA	83.0	121.0	105.0	103.0	60.0	140.0	1.9	20.0
2-chlorotoluene	5.0	ND	ND	18.5	NA	20.0	ND	21.6	19.1	20.0	92.5	NA	80.0	126.0	108.0	95.5	60.0	140.0	12.3	20.0
4-chlorotoluene	5.0	ND	ND	21.7	NA	20.0	ND	19.6	21.6	20.0	108.5	NA	80.0	125.0	98.0	108.0	60.0	140.0	9.7	20.0
tert-butyl-benzene	5.0	ND	ND	20.0	NA	20.0	ND	21.1	18.7	20.0	100.0	NA	79.0	114.0	105.5	93.5	60.0	140.0	12.1	20.0
1,2,4-trimethylbenzene	5.0	ND	ND	20.3	NA	20.0	ND	21.1	20.8	20.0	101.5	NA	84.0	121.0	105.5	104.0	60.0	140.0	1.4	20.0
sec-butyl-benzene	5.0	ND	ND	19.2	NA	20.0	ND	20.6	20.1	20.0	96.0	NA	81.0	122.0	103.0	100.5	60.0	140.0	2.5	20.0

Notes and Definitions:

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KERON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49239	Run Date:	11/11/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_9	SMPL Num:	11-119-05	SMPL DF:	1
Matrix:	Water	BLK FLNM:	9BK00234	SMPL FLNM:	9VR00239	MS DF:	1
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	9VR00240	MSD DF:	1
		LCS FLNM:	9QC00235	MSD FLNM:	9VR00241		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
	RDL	BLK	BLK2	LCS	LCS2	LCS Spike Level	SMPL	MS	MSD	MS Spike Level	LCS	LCS2	LCS LCL	LCS UCL	MS	MSD	MS LCL	MS UCL	MS RPD	RPD UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
p-isopropyl-toluene	5.0	ND	ND	19.1	NA	20.0	ND	20.1	20.1	20.0	95.5	NA	80.0	119.0	100.5	100.5	60.0	140.0	0.0	20.0
1,3-dichlorobenzene	5.0	ND	ND	20.0	NA	20.0	ND	20.4	20.4	20.0	100.0	NA	85.0	119.0	102.0	102.0	60.0	140.0	0.0	20.0
1,4-dichlorobenzene	5.0	ND	ND	19.8	NA	20.0	ND	20.5	20.4	20.0	99.0	NA	82.0	122.0	102.5	102.0	18.0	190.0	0.5	20.0
n-butyl-benzene	5.0	ND	ND	19.4	NA	20.0	ND	20.6	20.4	20.0	97.0	NA	80.0	125.0	103.0	102.0	60.0	140.0	1.0	20.0
1,2-dichlorobenzene	5.0	ND	ND	20.6	NA	20.0	ND	21.4	21.4	20.0	103.0	NA	86.0	119.0	107.0	107.0	19.0	190.0	0.0	20.0
1,2-dibromo-3-chloropropane	5.0	ND	ND	18.8	NA	20.0	ND	18.0	19.3	20.0	94.0	NA	66.0	134.0	90.0	96.5	60.0	140.0	7.0	20.0
1,2,4-trichlorobenzene	5.0	ND	ND	20.5	NA	20.0	ND	21.1	21.1	20.0	102.5	NA	78.0	122.0	105.5	105.5	60.0	140.0	0.0	20.0
hexachlorobutadiene	5.0	ND	ND	19.0	NA	20.0	ND	20.3	19.8	20.0	95.0	NA	73.0	125.0	101.5	99.0	60.0	140.0	2.5	20.0
napthalene	10.0	ND	ND	21.6	NA	20.0	ND	21.1	21.9	20.0	108.0	NA	74.0	148.0	105.5	109.5	60.0	140.0	3.7	20.0
1,2,3-trichlorobenzene	5.0	ND	ND	20.3	NA	20.0	ND	21.1	21.9	20.0	101.5	NA	74.0	124.0	105.5	109.5	60.0	140.0	3.7	20.0

BLK2 = Second Method Blank
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RDL = Reporting Detection Limit
BLK = Method Blank

KEMRON ENVIRONMENTAL SERVICES , OVL
SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP : WG49168 | EXT DATE : 11/9/98 | RUN DATE : 11/10/98 | INSTRUMENT : HPMS3
METHOD : M625 | BENCH SHEET : V104P79 | SMPL ID : 11-058-01 | ANALYST : mdc
MATRIX : WATER | BLK FLNM : 14983.D | SMPL FLNM : 14997.D
CONCENTRATION UNITS : UG/L | LCS FLNM: 14984.D | MS FLNM : 14998.D
PREP WORK GRP : WG49030 | MSD FLNM : 14999.D

ANALYTE	CONCENTRATION , ug / L								PERCENT RECOVERY , %									PERCENT			BEYOND LIMITS				
	RDL	BLANK	LCS SPIKE ADDED	LCS	SAMPLE	MS SPIKE ADDED	MS	MSD	BLANK	LCS	LCS LCL	LCS UCL	SAMPLE	MS	MSD	MS LCL	MS UCL	DUP RPD	MSD RPD	RPD UCL	SAMPLE	BLANK	LCS	MS	MSD
PYRIDINE	5.0	ND	100	35.1	ND	200	52.3	59.8	NA	35.1	5	150	NA	26.1	29.9	5	150	NA	13	40					
N-NITROSODIMETHYLAMINE	5.0	ND	100	48.7	ND	200	83.6	85.6	NA	48.7	5	150	NA	41.8	42.8	5	150	NA	2	40					
ANILINE	10.0	ND	100	60.1	ND	200	0.0	0.0	NA	60.1	5	150	NA	0.0	0.0	5	150	NA	#DIV/0!	40				L	L
PHENOL	5.0	ND	100	31.1	ND	200	55.7	59.8	NA	31.1	5	112	NA	27.8	29.9	5	112	NA	7	40					
BIS(2-CHLOROETHYL)ETHER	5.0	ND	100	70.5	ND	200	131.7	144.0	NA	70.5	12	158	NA	65.8	72.0	12	158	NA	9	40					
2-CHLOROPHENOL	5.0	ND	100	63.7	ND	200	123.9	134.4	NA	63.7	23	134	NA	62.0	67.2	23	134	NA	8	40					
1,3-DICHLOROBENZENE	5.0	ND	100	50.1	ND	200	108.4	116.8	NA	50.1	5	172	NA	54.7	58.4	5	172	NA	7	40					
1,4-DICHLOROBENZENE	10.0	ND	100	50.1	ND	200	111.8	116.5	NA	50.1	20	124	NA	55.9	58.3	20	124	NA	4	40					
BENZYL ALCOHOL	5.0	ND	100	66.6	ND	200	124.6	125.5	NA	66.6	5	150	NA	62.3	62.7	5	150	NA	1	40					
1,2-DICHLOROBENZENE	5.0	ND	100	52.9	ND	200	114.2	123.4	NA	52.9	32	129	NA	57.1	61.7	32	129	NA	8	40					
2-METHYLPHENOL	5.0	ND	100	64.1	ND	200	107.6	114.1	NA	64.1	5	150	NA	53.8	57.0	5	150	NA	6	40					
BIS(2-CHLOROISOPROPYL)ETH	5.0	ND	100	84.0	ND	200	171.7	181.7	NA	84.0	36	166	NA	85.9	90.8	36	166	NA	6	40					
3- & 4-METHYLPHENOL	5.0	ND	100	59.2	ND	200	98.7	103.5	NA	59.2	5	150	NA	49.4	51.7	5	150	NA	5	40					
N-NITROSO-DI-N-PROPYLAMINE	5.0	ND	100	67.5	ND	200	140.6	145.5	NA	67.5	5	230	NA	70.3	72.8	5	230	NA	3	40					
HEXACHLOROETHANE	5.0	ND	100	53.4	ND	200	113.8	125.8	NA	53.4	40	113	NA	56.9	62.9	40	113	NA	10	40					
NITROBENZENE	5.0	ND	100	65.2	ND	200	143.5	156.3	NA	65.2	35	180	NA	71.7	78	35	180	NA	8	40					
ISOPHORONE	5.0	ND	100	76.9	ND	200	159.0	164.5	NA	76.9	21	196	NA	79.5	82.3	21	196	NA	3	40					
2-NITROPHENOL	5.0	ND	100	64.6	ND	200	138.9	145.2	NA	64.6	29	182	NA	69.4	72.6	29	182	NA	4	40					
2,4-DIMETHYLPHENOL	5.0	ND	100	72.6	ND	200	32.6	35.8	NA	72.6	32	119	NA	16.3	17.9	32	119	NA	10	40				L	L
BIS(2-CHLOROETHOXY)METHAN	25.0	ND	100	69.7	ND	200	141.5	150.4	NA	69.7	33	184	NA	70.7	75.2	33	184	NA	6	40					
BENZOIC ACID	5.0	ND	100	9.1	ND	200	44.7	60.3	NA	9.1	5	150	NA	22.4	30.1	5	150	NA	30	40					
2,4-DICHLOROPHENOL	5.0	ND	100	65.5	ND	200	135.0	147.4	NA	65.5	39	135	NA	67.5	73.7	39	135	NA	9	40					
1,2,4-TRICHLOROBENZENE	5.0	ND	100	54.2	ND	200	117.8	126.9	NA	54.2	44	142	NA	58.9	63.5	44	142	NA	7	40					
NAPHTHALENE	5.0	ND	100	59.1	ND	200	126.5	134.3	NA	59.1	21	133	NA	63.2	67.1	21	133	NA	6	40					
4-CHLOROANILINE	5.0	ND	100	63.3	ND	200	10.1	3.4	NA	63.3	5	150	NA	5.1	1.7	5	150	NA	100	40					L
HEXACHLOROBUTADIENE	10.0	ND	100	52.2	ND	200	117.7	128.5	NA	52.2	24	118	NA	58.8	64.3	24	118	NA	9	40					
4-CHLORO-3-METHYLPHENOL	5.0	ND	100	78.5	ND	200	152.0	164.7	NA	78.5	22	147	NA	76.0	82.4	22	147	NA	8	40					
2-METHYLNAPHTHALENE	5.0	ND	100	62.2	ND	200	132.1	135.6	NA	62.2	5	150	NA	66.0	67.8	5	150	NA	3	40					
HEXACHLOROCYCLOPENTADIE	5.0	ND	100	51.7	ND	200	84.6	93.8	NA	51.7	5	150	NA	42.3	46.9	5	150	NA	10	40					
2,4,6-TRICHLOROPHENOL	25.0	ND	100	72.2	ND	200	162.2	162.7	NA	72.2	37	144	NA	76.1	81.4	37	144	NA	7	40					
2,4,5-TRICHLOROPHENOL	5.0	ND	100	78.8	ND	200	164.0	176.3	NA	78.8	5	150	NA	82.0	88.2	5	150	NA	7	40					
2-CHLORONAPHTHALENE	25.0	ND	100	66.8	ND	200	141.5	149.2	NA	66.8	60	118	NA	70.8	74.6	60	118	NA	5	40					
2-NITROANILINE	5.0	ND	100	69.9	ND	200	6.9	2.8	NA	69.9	5	150	NA	3.5	1.4	5	150	NA	84	40				L	L
DIMETHYLPHTHALATE	5.0	ND	100	83.3	ND	200	164.3	175.3	NA	83.3	5	112	NA	82.2	88	5	112	NA	6	40					
ACENAPHTHYLENE	5.0	ND	100	72.2	ND	200	146.4	152.2	NA	72.2	33	145	NA	73.2	76.1	33	145	NA	4	40					
2,6-DINITROTOLUENE	5.0	ND	100	83.0	ND	200	162.7	174.8	NA	83.0	50	158	NA	81.4	87.3	50	158	NA	7	40					
3-NITROANILINE	25.0	ND	100	71.1	ND	200	6.8	2.4	NA	71.1	5	150	NA	3.4	1.2	5	150	NA	95	40				L	L
ACENAPHTHENE	5.0	ND	100	71.0	ND	200	144.2	150.4	NA	71.0	47	145	NA	72.1	75.2	47	145	NA	4	40					
2,4-DINITROPHENOL	25.0	ND	100	75.5	ND	200	136.2	159.2	NA	75.5	5	191	NA	68.1	79.6	5	191	NA	16	40					
4-NITROPHENOL	25.0	ND	100	73.8	ND	200	7.3	3.0	NA	73.8	5	132	NA	3.7	1.5	5	132	NA	85	40				L	L
DIBENZOFURAN	5.0	ND	100	72.7	ND	200	151.7	156.3	NA	72.7	5	150	NA	75.8	78.2	5	150	NA	3	40					
2,4-DINITROTOLUENE	5.0	ND	100	90.7	ND	200	172.6	184.9	NA	90.7	39	139	NA	86.3	92.5	39	139	NA	7	40					

NOTES & DEFINITIONS :
NA = NOT APPLICABLE
NS = NOT SPIKED
ND = NOT DETECTED
RDL=REPORTING DETECTION LIMIT

KEMRON ENVIRONMENTAL SERVICES , OVL
SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP : WG49168 | EXT DATE : 11/9/98 | RUN DATE : 11/10/98 | INSTRUMENT : HPMS3
METHOD : M625 | BENCH SHEET : V104P79 | SMPL ID : 11-058-01 | ANALYST : mdc
MATRIX : WATER | BLK FLNM : 14983.D | SMPL FLNM : 14997.D
CONCENTRATION UNITS : UG/L | LCS FLNM: 14984.D | MS FLNM : 14998.D
PREP WORK GRP : WG49030 | MSD FLNM : 14999.D

ANALYTE	RDL	CONCENTRATION , ug / L							PERCENT RECOVERY , %									PERCENT			BEYOND LIMITS				
		BLANK	LCS SPIKE ADDED	LCS	SAMPLE	MS SPIKE ADDED	MS	MSD	BLANK	LCS	LCS LCL	LCS UCL	SAMPLE	MS	MSD	MS LCL	MS UCL	DUP RPD	MSD RPD	RPD UCL	SAMPLE	BLANK	LCS	MS	MSD
DIETHYLPHTHALATE	5.0	ND	100	89.6	ND	200	172.3	185.8	NA	89.6	5	114	NA	86.1	92.8	5	114	NA	7	40					
FLUORENE	5.0	ND	100	77.3	ND	200	157.1	163.9	NA	77.3	25	158	NA	78.6	81.9	25	158	NA	4	40					
4-CHLOROPHENYL-PHENYL ETH	5.0	ND	100	73.6	ND	200	151.2	158.2	NA	73.6	59	121	NA	75.6	79.1	59	121	NA	5	40					
4-NITROANILINE	25.0	ND	100	92.6	ND	200	7.6	7.8	NA	92.6	5	150	NA	3.8	3.9	5	150	NA	3	40				L	L
1,2-DIPHENYLHYDRAZINE *	5.0	ND	100	84.3	ND	200	168.8	178.0	NA	84.3	5	150	NA	84.4	89.0	5	150	NA	5	40					
4,6-DINITRO-2-METHYLPHENOL	25.0	ND	100	102.1	ND	200	185.3	202.5	NA	102.1	5	181	NA	92.6	101.3	5	181	NA	9	40					
N-NITROSODIPHENYLAMINE **	5.0	ND	100	90.2	ND	200	156.5	173.4	NA	90.2	5	150	NA	78.2	87	5	150	NA	10	40					
4-BROMOPHENYL-PHENYL ETH	5.0	ND	100	70.1	ND	200	139.2	149.0	NA	70.1	53	127	NA	69.1	74.5	53	127	NA	7	40					
HEXACHLOROBENZENE	5.0	ND	100	81.9	ND	200	160.6	172.4	NA	81.9	5	152	NA	80.3	86.2	5	152	NA	7	40					
PENTACHLOROPHENOL	25.0	ND	100	72.8	ND	200	164.5	187.4	NA	72.8	14	176	NA	82.3	93.7	14	176	NA	13	40					
PHENANTHRENE	5.0	ND	100	88.0	ND	200	171.1	183.5	NA	88.0	54	120	NA	85.6	91.8	54	120	NA	7	40					
ANTHRACENE	5.0	ND	100	92.5	ND	200	163.3	176.1	NA	92.5	27	133	NA	81.7	88.1	27	133	NA	8	40					
CARBAZOLE	5.0	ND	100	101.9	ND	200	186.1	205.4	NA	101.9	5	150	NA	93.0	102.7	5	150	NA	10	40					
DI-N-BUTYLPHTHALATE	5.0	ND	100	92.9	ND	200	175.4	194.0	NA	92.9	1	118	NA	87.7	97.0	1	118	NA	10	40					
FLUORANTHENE	5.0	ND	100	91.9	ND	200	177.8	194.9	NA	91.9	26	137	NA	88.9	97	26	137	NA	9	40					
PYRENE	5.0	ND	100	96.2	ND	200	180.0	195.0	NA	96.2	52	115	NA	90.0	97.5	52	115	NA	8	40					
BUTYLBENZYLPHTHALATE	5.0	ND	100	102.7	ND	200	164.2	202.6	NA	102.7	5	152	NA	92.1	101	5	152	NA	10	40					
BENZO(A)ANTHRACENE	10.0	ND	100	98.2	ND	200	183.4	203.2	NA	98.2	5	262	NA	91.7	101.6	5	262	NA	10	40					
3,3'-DICHLOROBENZIDINE	5.0	ND	100	105.8	ND	200	0.4	0.0	NA	105.8	33	143	NA	0.2	0.0	33	143	NA	200	40				L	L
CHRYSENE	5.0	ND	100	95.2	ND	200	180.7	198.0	NA	95.2	17	168	NA	90.4	99.0	17	168	NA	9	40					
BIS(2-ETHYLHEXYL)PHTHALATE	5.0	ND	100	98.9	ND	200	178.8	198.4	NA	98.9	8	158	NA	89.4	99.2	8	158	NA	10	40					
DI-N-OCTYLPHTHALATE	5.0	ND	100	108.9	ND	200	206.6	224.9	NA	108.9	4	146	NA	103.3	112.4	4	146	NA	8	40					
BENZO[B]FLUORANTHENE	5.0	ND	100	98.3	ND	200	193.0	208.8	NA	98.3	24	159	NA	96.5	104.4	24	159	NA	8	40					
BENZO[K]FLUORANTHENE	5.0	ND	100	110.3	ND	200	211.2	221.0	NA	110.3	11	162	NA	105.6	110.5	11	162	NA	5	40					
BENZO[A]PYRENE	5.0	ND	100	106.2	ND	200	185.8	201.6	NA	106.2	17	163	NA	92.9	100.8	17	163	NA	8	40					
INDENO[1,2,3-CD]PYRENE	5.0	ND	100	104.3	ND	200	203.7	218.4	NA	104.3	5	171	NA	101.9	109.2	5	171	NA	7	40					
DIBENZ[A,H]ANTHRACENE	5.0	ND	100	112.2	ND	200	218.5	235.5	NA	112.2	5	227	NA	109.2	117.7	5	227	NA	7	40					
BENZO[G,H,I]PERYLENE	5.0	ND	100	107.4	ND	200	209.4	222.6	NA	107.4	5	219	NA	104.7	111.3	5	219	NA	6	40					
SURROGATES																									
2-FLUOROPHENOL		43.2	100	46.2	37.14	100	41.5	45.9	43.2	46.2	21	100	37.1	41.5	45.9	21	100								
PHENOL - D5		30.0	100	31.2	24.0	100	29.2	31.3	30.0	31.2	10	94	24.0	29.2	31.3	10	94								
NITROBENZENE - D5		31.7	50	33.5	29.8	50	34.1	36.4	63.3	67.0	35	114	59.5	68.3	72.8	35	114								
2-FLUOROBIPHENYL		33.9	50	35.5	31.5	50	37.9	38.7	67.7	70.9	43	116	63.1	75.9	77.4	43	116								
2,4,6-TRIBROMOPHENOL		76.0	100	80.6	76.3	100	80.2	88.1	76.0	80.6	10	123	76.3	80.2	88.1	10	123								
p-TERPHENYL - D14		55.1	50	55.9	47.4	50	49.4	54.7	110.1	111.8	33	141	94.8	98.8	109.5	33	141								

KEMRON ENVIRONMENTAL SERVICES

MARIETTA, OH

QUALITY CONTROL SUMMARY / 8081 SOILS , FRONT

INSTRUMENT : HP 9

SAMPLE ID : 11-121-01

EXT'N DATE : 11/9/98 ANALYST : ECL BLK FLNM : 1286 SMPL FLNM : 1289

EXT'N BENCH SHT : V104P73 RUN DATE : 11/10/98 LCS FLNM : 1287 MS FLNM : 1290

EXT'N WORK GRP : WG49010 ANAL WDRK GRP : WG49090 MSD FLNM : 1291

COMPOUND	RDL	CONCENTRATION , ug/kg					% RECOVERY									PERCENT		
		Blank	LCS	Sample	MS	MSD	Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	MS/MSD RPD	RPD Advisory Limit	Blank LCS Sample MS MSD
ALPHA-BHC	1.7	ND	9.15	ND	9.60	9.47	NA	54.8	37	134	NA	57.5	56.7	51	145	1.4	0-43	
GAMMA-BHC	1.7	ND	9.70	ND	10.0	9.60	NA	58.1	32	127	NA	60.1	57.5	54	134	4.4	0-18	
BETA-BHC	1.7	ND	9.76	ND	10.0	11.3	NA	58.4	17	147	NA	60.1	67.7	51	129	11.8	0-28	
HEPTACHLOR	1.7	ND	10.1	ND	10.8	12.1	NA	60.3	34	111	NA	63.6	72.5	40	139	12.8	0-37	
DELTA-BHC	1.7	ND	10.1	ND	10.4	9.91	NA	60.3	19	140	NA	62.1	59.3	56	138	4.6	0-78	
ALDRIN	1.7	ND	9.87	ND	10.5	12.4	NA	59.1	42	122	NA	63.2	74.3	26	143	16.2	0-38	
HEPTACHLOR EPOXIDE	1.7	ND	10.0	ND	10.5	11.9	NA	59.8	37	142	NA	62.9	71.2	51	135	12.3	0-40	
GAMMA-CHLORDANE	1.7	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40	
ALPHA-CHLORDANE	1.7	ND	NA	ND	NA	NA	NA	NA	54	119	NA	NA	NA	45	115	NA	0-17	
ENDOSULFAN I	1.7	ND	8.14	ND	8.59	8.92	NA	48.7	45	153	NA	51.4	58.4	37	123	14.4	0-22	
4,4-DDE	3.3	ND	10.0	ND	10.8	12.2	NA	59.9	30	145	NA	64.6	73.1	64	152	12.4	0-23	
DIELDRIN	3.3	ND	10.6	ND	11.1	12.7	NA	63.2	36	146	NA	66.4	76.2	23	171	13.7	0-20	
ENDRIN	3.3	ND	10.2	ND	10.5	12.4	NA	60.9	30	147	NA	62.8	74.1	56	154	16.5	0-28	
4,4-DDD	3.3	ND	10.6	ND	11.0	12.8	NA	63.4	31	141	NA	65.9	76.6	56	170	15.0	0-30	
ENDOSULFAN II	3.3	ND	7.67	ND	8.02	10.1	NA	45.9	D	202	NA	48.0	60.3	21	117	22.6	0-18	
4,4-DDT	3.3	ND	10.4	ND	11.0	13.0	NA	62.2	26	160	NA	66.0	77.6	42	168	16.4	0-22	
ENDRIN ALDEHYDE	3.3	ND	6.26	ND	6.70	8.33	NA	37.5	NA	NA	NA	40.1	49.9	21	115	21.7	0-40	
ENDOSULFAN SULFATE	3.3	ND	6.53	ND	6.60	8.38	NA	39.1	26	144	NA	39.5	50.1	31	117	23.6	0-30	
METHOXYCHLOR	17	ND	9.56	ND	10.0	12.0	NA	57.3	NA	NA	NA	60.0	72.1	26	196	18.3	0-19	
ENDRIN KETONE	3.3	ND	8.07	ND	8.17	10.0	NA	48.3	NA	NA	NA	48.9	60	NA	NA	20.4		
Tech-CHLORDANE	33	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40	
TOXAPHENE	33	ND	NA	ND	NA	NA	NA	NA	41	126	NA	NA	NA	40	125	NA	0-40	
SURROGATES																		
2,4,5,6-TETRACHLORO-M-XYLENE		11.6	9.74	8.37	8.22	8.33	58.2	48.7	13	154	41.8	41.1	46.6	13	154			
DECACHLOROBIPHENYL		13.7	12.0	11.7	9.80	11.0	68.6	59.8	25	140	58.7	49.0	54.9	25	140			

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 16.7 ug/kg

SURROGATES spiked at 20 ug/kg

NA = NOT APPLICABLE

DL = DILUTED OUT

ND = NOT DETECTED

RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE

MS=MATRIX SPIKE

MSD=MATRIX SPIKE DUPLICATE

KEMRON ENVIRONMENTAL SERVICES

MARIETTA, OH

QUALITY CONTROL SUMMARY / 8080 SOILS , REAR

INSTRUMENT : HP 9

SAMPLE ID : 11-121-01

EXT'N DATE : 11/9/98 ANALYST : ECL BLK FLNM : 1286 SMPL FLNM : 1289

EXT'N BENCH SHT : V104P73 RUN DATE : 11/10/98 LCS FLNM : 1287 MS FLNM : 1290

EXT'N WORK GRP : WG49010 ANAL WORK GRP : WG49090 MSD FLNM : 1291

COMPOUND	RDL	CONCENTRATION , ug/kg					% RECOVERY									PERCENT		
		Blank	LCS	Sample	MS	MSD	Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	MS/MSD RPD	RPD Advisory Limit	Blank LCS Sample MS MSD
ALPHA-BHC	1.7	ND	10.6	ND	11.3	12.7	NA	63.4	37	134	NA	67.5	75.8	51	145	11.5	0-43	
GAMMA-BHC	1.7	ND	11.6	ND	12.2	13.7	NA	69.6	32	127	NA	73.2	82.1	54	134	11.9	0-18	
BETA-BHC	1.7	ND	11.0	ND	11.5	12.7	NA	66.0	17	147	NA	68.7	76.2	51	129	10.3	0-28	
HEPTACHLOR	1.7	ND	11.9	ND	12.0	13.4	NA	67.7	34	111	NA	71.9	80.5	46	139	11.3	0-37	
DELTA-BHC	1.7	ND	12.2	ND	12.8	14.0	NA	72.8	19	140	NA	76.7	83.7	56	138	8.7	0-78	
ALDRIN	1.7	ND	11.8	ND	12.4	13.9	NA	70.8	42	122	NA	74.5	83.4	26	143	11.3	0-38	
HEPTACHLOR EPOXIDE	1.7	ND	12.0	ND	12.4	14.3	NA	72.0	37	142	NA	74.4	85.7	51	135	14.1	0-40	
GAMMA-CHLORDANE	1.7	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40	
ALPHA-CHLORDANE	1.7	ND	NA	ND	NA	NA	NA	NA	54	119	NA	NA	NA	45	115	NA	0-17	
ENDOSULFAN I	1.7	ND	9.70	ND	10.2	11.4	NA	58.1	45	153	NA	60.8	68.5	37	123	11.9	0-22	
4,4-DDE	3.3	ND	12.7	ND	13.7	14.9	NA	76.3	30	145	NA	81.8	89.4	64	152	8.9	0-23	
DIELDRIN	3.3	ND	12.8	ND	13.4	15.1	NA	76.5	36	146	NA	80.3	90.3	23	171	11.8	0-20	
ENDRIN	3.3	ND	11.7	ND	12.4	14.6	NA	69.9	30	147	NA	74.5	87.3	56	154	15.8	0-28	
4,4-DDD	3.3	ND	12.4	ND	13.1	14.6	NA	74.0	31	141	NA	78.3	87.5	56	179	11.1	0-30	
ENDOSULFAN II	3.3	ND	9.27	ND	9.75	11.0	NA	55.5	D	202	NA	58.4	65.7	21	117	11.8	0-18	
4,4-DDT	3.3	ND	12.8	ND	13.8	15.7	NA	76.8	25	160	NA	81.2	94.0	42	168	14.6	0-22	
ENDRIN ALDEHYDE	3.3	ND	7.85	ND	8.44	9.68	NA	47.0	NA	NA	NA	50.5	58.0	21	115	13.7	0-40	
ENDOSULFAN SULFATE	3.3	ND	7.48	ND	7.55	9.19	NA	44.8	25	144	NA	45.2	55.0	31	117	19.6	0-30	
METHOXYCHLOR	17	ND	12.4	ND	12.3	15.3	NA	74.0	NA	NA	NA	73.8	91.6	26	196	21.5	0-19	
ENDRIN KETONE	3.3	ND	9.81	ND	10.1	11.6	NA	58.7	NA	NA	NA	60.6	69.3	NA	NA	13.4		
Tech-CHLORDANE	33	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40	
TOXAPHENE	33	ND	NA	ND	NA	NA	NA	NA	41	126	NA	NA	NA	40	125	NA	0-40	
SURROGATES																		
2,4,5,6-TETRACHLORO-M-XYLENE		13.4	11.7	10.5	9.89	8.67	66.8	58.3	13	154	52.6	48.4	43.3	13	154			
DECACHLOROBIPHENYL		16.0	15.2	11.9	12.5	13.5	80.1	75.9	25	140	59.6	62.5	67.4	25	140			

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 16.7 ug/kg

SURROGATES spiked at 20 ug/kg

NA = NOT APPLICABLE

DL = DILUTED OUT

ND = NOT DETECTED

RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE

MS=MATRIX SPIKE

MSD=MATRIX SPIKE DUPLICATE

KEMRON ENVIRONMENTAL SERVICES
MARIETTA, OH
QUALITY CONTROL SUMMARY / 8081 WATERS, FRONT

INSTRUMENT : HP9 — SAMPLE ID : 11-126-02

EXT'N DATE : 11/9/98 — ANALYST : ECL — BLK FLNM : 1274 — SMPL FLNM : 1298

EXT'N BENCH SHT : V104P75 — RUN DATE : 11/10/98 — LCS FLNM : 1275 — MS FLNM : 1299

EXT'N WORK GRP : WG40013 — ANAL WORK GRP : WG40091 — MSD FLNM : 1300

COMPOUND	RDL	CONCENTRATION, ug/L Blank	LCS	Sample	MS	MSD	% RECOVERY Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	PERCENT MS/MSD RPD	RPD Advisory Limits	Blank	LCS	Sample	MS	MSD
ALPHA-BHC	0.05	ND	0.255	ND	0.465	0.456	NA	51.0	37	134	NA	46.5	45.6	51	145	2.0	0-43				L	L
GAMMA-BHC	0.05	ND	0.277	ND	0.500	0.498	NA	55.4	32	127	NA	50.0	49.8	54	134	0.4	0-18				L	L
BETA-BHC	0.05	ND	0.364	ND	0.701	0.690	NA	72.8	17	147	NA	70.1	69.0	51	129	1.6	0-26					
HEPTACHLOR	0.05	ND	0.260	ND	0.524	0.515	NA	56.0	34	111	NA	52.4	51.5	40	139	1.7	0-37					
DELTA-BHC	0.05	ND	0.349	ND	0.702	0.757	NA	69.8	19	140	NA	70.2	75.7	56	138	7.5	0-78					
ALDRIN	0.05	ND	0.283	ND	0.520	0.509	NA	56.6	42	122	NA	52.0	50.9	28	143	2.1	0-38					
HEPTACHLOR EPOXIDE	0.05	ND	0.336	ND	0.582	0.606	NA	67.2	37	142	NA	58.2	60.6	51	135	4.0	0-40					
GAMMA-CHLORDANE	0.05	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	40	115	NA	0-40					
ALPHA-CHLORDANE	0.05	ND	NA	ND	NA	NA	NA	NA	54	119	NA	NA	NA	45	115	NA	0-17					
ENDOSULFAN I	0.05	ND	0.330	ND	0.565	0.586	NA	66.0	45	153	NA	56.5	58.6	37	123	3.6	0-22					
4,4-DDE	0.10	ND	0.349	ND	0.625	0.649	NA	69.8	30	145	NA	62.5	64.9	64	152	3.8	0-23				L	
DIELDRIN	0.10	ND	0.370	ND	0.675	0.692	NA	74.0	36	146	NA	67.5	69.2	23	171	2.5	0-20					
ENDRIN	0.10	ND	0.349	ND	0.659	0.651	NA	69.8	30	147	NA	65.9	65.1	56	154	1.2	0-28					
4,4-DDD	0.10	ND	0.381	ND	0.755	0.735	NA	76.2	31	141	NA	75.5	73.5	58	179	2.7	0-30					
ENDOSULFAN II	0.10	ND	0.347	ND	0.653	0.646	NA	69.4	0	202	NA	65.3	64.6	21	117	1.1	0-18					
4,4-DDT	0.10	ND	0.370	ND	0.744	0.747	NA	74.0	25	160	NA	74.4	74.7	42	168	0.4	0-22					
ENDRIN ALDEHYDE	0.10	ND	0.295	ND	0.514	0.508	NA	59.0	NA	NA	NA	51.4	50.8	21	115	1.2	0-40					
ENDOSULFAN SULFATE	0.10	ND	0.289	ND	0.529	0.554	NA	58.0	26	144	NA	52.9	55.4	31	117	4.6	0-30					
METHOXYCHLOR	0.50	ND	0.340	ND	0.608	0.602	NA	68.0	NA	NA	NA	60.8	60.2	26	196	0.9	0-19					
ENDRIN KETONE	0.10	ND	0.310	ND	0.608	0.642	NA	62.2	NA	NA	NA	60.8	64.2	NA	NA	5.4						
Tech-CHLORDANE	1.00	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40					
TOXAPHENE	1.00	ND	NA	ND	NA	NA	NA	NA	41	126	NA	NA	NA	40	125	NA	0-40					
SURROGATES																						
2,4,5,6-TETRACHLORO-M-XYLENE		8.52	8.72	7.31	7.74	7.70	32.6	43.6	13	154	36.5	38.7	38.5	13	154							
DECACHLOROBIPHENYL		9.88	13.7	8.38	6.89	9.60	49.4	68.7	25	140	41.9	34.4	48.0	25	140							

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 0.5 ug/L — LCS=LABORATORY CONTROL SAMPLE

SURROGATES spiked at 20 ug/L — MS=MATRIX SPIKE

NA = NOT APPLICABLE — MSD=MATRIX SPIKE DUPLICATE

DL = DILUTED OUT

ND = NOT DETECTED

RDL=REPORTING DETECTION LIMIT

KEMRON ENVIRONMENTAL SERVICES
MARIETTA, OH
QUALITY CONTROL SUMMARY / 8081 WATERS , REAR

INSTRUMENT : HP9

EXT'N DATE : 11/9/98 ANALYST : ECL BLK FLNM : 1274 SAMPLE ID : 11-126-02
EXT'N BENCH SHT : V104P75 RUN DATE : 11/10/98 LCS FLNM : 1275 SMPL FLNM : 1298
EXT'N WORK GRP : WG40013 ANAL WORK GRP : WG40001 MS FLNM : 1299
MSD FLNM : 1300

COMPOUND	RDL	CONCENTRATION , ug/L					% RECOVERY								PERCENT	
		Blank	LCS	Sample	MS	MSD	Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	MS/MSD RPD	RPD Advisory Limists
ALPHA-BHC	0.05	ND	0.307	I ND	0.518	0.533	NA	61.4	37	134	NA	51.8	53.3	51	145	2.9	0-43
GAMMA-BHC	0.05	ND	0.352	I ND	0.623	0.655	NA	70.4	32	127	NA	62.3	65.5	54	134	5.0	0-18
BETA-BHC	0.05	ND	0.383	I ND	0.742	0.814	NA	76.6	17	147	NA	74.2	81.4	51	129	9.3	0-28
HEPTACHLOR	0.05	ND	0.319	I ND	0.545	0.555	NA	63.8	34	111	NA	54.5	55.5	40	139	1.8	0-37
DELTA-BHC	0.05	ND	0.441	I ND	0.805	0.850	NA	88.2	19	140	NA	80.5	85.0	56	138	5.4	0-78
ALDRIN	0.05	ND	0.328	I ND	0.573	0.592	NA	65.6	42	122	NA	57.3	59.2	28	143	3.3	0-38
HEPTACHLOR EPOXIDE	0.05	ND	0.410	I ND	0.663	0.727	NA	82.0	37	142	NA	66.3	72.7	51	135	9.2	0-40
GAMMA-CHLORDANE	0.05	ND	NA	I ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40
ALPHA-CHLORDANE	0.05	ND	NA	I ND	NA	NA	NA	NA	54	119	NA	NA	NA	45	115	NA	0-17
ENDOSULFAN I	0.05	ND	0.386	I ND	0.656	0.695	NA	77.2	45	153	NA	65.6	69.5	37	123	5.8	0-22
4,4-DDE	0.10	ND	0.444	I ND	0.782	0.828	NA	88.8	30	145	NA	78.2	82.8	64	152	5.7	0-23
DIELDRIN	0.10	ND	0.441	I ND	0.795	0.828	NA	88.2	36	146	NA	79.5	82.8	23	171	4.1	0-20
ENDRIN	0.10	ND	0.382	I ND	0.743	0.761	NA	76.4	30	147	NA	74.3	76.1	56	154	2.4	0-28
4,4-DDD	0.10	ND	0.444	I ND	0.869	0.874	NA	88.8	31	141	NA	86.9	87.4	58	179	0.6	0-30
ENDOSULFAN II	0.10	ND	0.402	I ND	0.745	0.772	NA	80.4	D	202	NA	74.5	77.2	21	117	3.6	0-18
4,4-DDT	0.10	ND	0.449	I ND	0.841	0.876	NA	89.8	25	160	NA	84.1	87.6	42	168	4.1	0-22
ENDRIN ALDEHYDE	0.10	ND	0.351	I ND	0.615	0.630	NA	70.2	NA	NA	NA	61.5	63.0	21	115	2.0	0-40
ENDOSULFAN SULFATE	0.10	ND	0.336	I ND	0.581	0.622	NA	67.2	26	144	NA	58.1	62.2	31	117	6.5	0-10
METHOXYCHLOR	0.10	ND	0.417	I ND	0.842	0.825	NA	83	NA	NA	NA	84.2	82.5	26	196	2.0	0-19
ENDRIN KETONE	0.50	ND	0.401	I ND	0.710	0.756	NA	80	NA	NA	NA	71.0	75.6	NA	NA	0.0	
Tech-CHLORDANE	1.0	ND	NA	I ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40
TOXAPHENE	1.0	ND	NA	I ND	NA	NA	NA	NA	41	126	NA	NA	NA	40	125	NA	0-40
SURROGATES																	
2,4,5,6-TETRACHLORO-M-XYLENE		7.44	9.33	I 6.03	8.52	9.76	37.2	46.7	13	154	40.1	42.6	48.8	13	154		
DECACHLOROBIPHENYL		12.4	17.7	I 9.57	8.37	13.0	62.2	88.3	25	140	47.9	41.9	64.8	25	140		

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 0.5 ug/L
SURROGATES spiked at 20 ug/L
NA = NOT APPLICABLE
DL = DILUTED OUT
ND = NOT DETECTED
RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE
MS=MATRIX SPIKE
MSD=MATRIX SPIKE DUPLICATE

KEMRON ENVIRONMENTAL SERVICES
MARIETTA, OH
QUALITY CONTROL SUMMARY / PCB SOILS , FRONT

	INSTRUMENT : HP10		SMPL ID : 11-121-01
EXT'N DATE : 11/9/98	ANALYST : CDB	BLK FLNM : 009F0101	SMPL FLNM : 011F0101
EXT'N BENCH SHT : V104P74	RUN DATE : 11/10/98	LCS FLNM : 010F0101	MS FLNM : 012F0101
EXT'N WORK GRP : WG49011	ANAL WORK GRP : WG49059		MSD FLNM : 013F0101

COMPOUND	RDL	CONCENTRATION , ug/Kg					% RECOVERY									PERCENT						
		Blank	LCS	Sample	MS	MSD	Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	MS/MSD RPD	RPD Advisory Limits	Blank	LCS	Sample	MS	MSD
AROCLOR 1016	17.0	ND	78.5	ND	73.1	75.7	NA	94.3	29	131	NA	87.8	90.9	29	131	3.5	NA					
AROCLOR 1221	17.0	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1232	17.0	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1242	17.0	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1248	17.0	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1254	33.0	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0-40					
AROCLOR 1260	33.0	ND	70.2	ND	67.6	66.6	NA	84.3	29	131	NA	81.3	79.9	29	131	1.8	NA					
SURROGATES																						
2,4,5,6-TETRACHLORO-M-XYLENE		5.32	5.44	3.55	4.56	1.99	79.8	81.5	29	133	53.3	68.2	29.9	29	133							
DECACHLOROBIPHENYL		5.14	5.23	3.33	4.09	4.32	77.0	78.4	30	173	49.9	61.4	64.8	30	173							

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 83.3 ug/kg
SURROGATES spiked at 6.67 ug/kg
NA = NOT APPLICABLE
DL = DILUTED OUT
ND = NOT DETECTED
RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE
MS=MATRIX SPIKE
MSD=MATRIX SPIKE DUPLICATE

ENVIRONMENTAL SERVICES

CHAIN-OF-CUSTODY RECORD

Project Contact: Jessica Farrar

Turn Around Requirements:

Project No.:

Project Name: Pedrickstown

Sampler (print): JSF

Signature: [signature]

Sample I.D. No.	Comp*	Grab	Date	Time	Protocol CWA	Protocol SW846	NUMBER OF SAMPLES	Hold	SVOCs	Pest/PCBs	VOCs	TSS	ADDITIONAL REQUIREMENTS
WEIR 110598	X		11/05/98				4		1	1	1	1	
INLET 110598		X	11/5/98	1240			4		1	1	1	1	SLURRY
MIX 110598		X	11/05/98	1205			4		1	1	1	1	
WEIR 110498	X		11/04/98				1					1	
WEIR 110398	X		11/03/98				1					1	
TEMPBLANK							1						

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
[signature]							

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:
			Natalie Booth	11/6/98	0956	c/c Sealed Samples intact Cooler temp 4

*Homogenize all composite samples prior to analysis

White – Lab Yellow – Office Pink – Field

NR

Work Order 1981111 Client Versar Mq #of Samples 6 Due Date 11-20 Page

nple #	Analyses	Reason	Removed By ADT	Removed From	MovedTo	Reliq. By	Ret'd by ADT	Ret'd To	Rec'd By	Reason
T5	O2	Test	[illegible]	walkin	wet	Big	[illegible]	walkin	Big	Storage
3	8081/PCB	EXT	RH 11/9/98 @0800	WALK-IN	S-LAB	NS	CEB 11/09/98 @ 0830	Archive	Big	Archive
2,4,5,6	TSS	Anal	DLR 11-09/1200	Walk-IN	wet	Big	DLR 11-09-98/1230	Archive	NS	Archive
,4	PCB	EXT	DLR 11-9-98 @ 0800	walk-in	S-LAB	Big	SMW 11-10-98 @0800	Dumpster	NS	Disposed
2,4	BNA	Ext	CEB 11/9/98 @ 1100	WALKIN	ELAB	Big	SMW 11-10-98 @0800	Dumpster	NS	Disposed
3	BNA	Ext	CEB 11/9/98 @ 1150	WALKIN	ELAB	Big	CEB 11/09/98 @ 1410	Archive	Big	Archive
-4	8260	anal	CMB 11/10/98 @ 1245	V-1	VOA	Big	MEJ 11/20/98 1630	Archive	NS	Archive

KEMRON Environmental Services
109 Satellite Park
Marietta, Ohio 45750
Phone: (740) 373-4071

Versar, Inc.
9200 Rumsey Road
Columbia, MD 21045-1934

Attention: William Burton

PO Number:
Account Number: VERSAR-MD-331

Login #: L9811172
Report Date: 11/23/98
Work ID: 4119-007/PACOE PEDRICKTOWN
Date Received: 11/10/98

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9811172-01	WEIR 1109A	L9811172-02	WEIR 1109B
L9811172-03	WEIR 1107	L9811172-04	WEIR 1106
L9811172-05	MIX 1109		

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

Dennis S. Tepe

Certified By
Dennis S. Tepe

KEMRON
ENVIRONMENTAL SERVICES

Login #L9811172
November 23, 1998 03:19 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9811172-01
Client Sample ID: WEIR 1109A
Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water
Collected: 11/09/98 0930
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	28		5.0	1	N/A	DLN	11/10/98	09:16	160.2

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811172-01
Client Sample ID: WEIR 1109A
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/09/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/12/98
Analysis Date: 11/13/98 Time: 19:32

Instrument: HP10
Analyst: CDB
Lab File ID: 018F0101

Method: 8082/3550
Run ID: R56396
Batch : WG49301

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016.....	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221.....	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232.....	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242.....	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248.....	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254.....	ug/L		ND	1.0	1
11096-82-5	Aroclor-1260.....	ug/L		ND	1.0	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene.....	45.9	(13 - 154%)
Decachlorobiphenyl.....	52.0	(25 - 140%)

RL = Reporting Limit

KEMRON ENVIR[illegible]ENTAL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811172-01
Client Sample ID: WEIR 1109A
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/09/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/12/98
Analysis Date: 11/14/98 Time:

Instrument: HP9
Analyst: ECL
Lab File ID: 1381

Method: 8081A\3510C
Run ID: R56335
Batch : WG49308

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L		ND	0.05	1
319-85-7	beta-BHC	ug/L		ND	0.05	1
319-86-8	delta-BHC	ug/L		ND	0.05	1
58-89-9	gamma-BHC (Lindane)	ug/L		ND	0.05	1
76-44-8	Heptachlor	ug/L		ND	0.05	1
309-00-2	Aldrin	ug/L		ND	0.05	1
1024-57-3	Heptachlor epoxide	ug/L		ND	0.05	1
959-98-8	Endosulfan I	ug/L		ND	0.05	1
60-57-1	Dieldrin	ug/L		ND	0.05	1
72-55-9	4,4'-DDE	ug/L		ND	0.10	1
72-20-8	Endrin	ug/L		ND	0.10	1
33213-65-9	Endosulfan II	ug/L		ND	0.10	1
72-54-8	4,4'-DDD	ug/L		ND	0.10	1
1031-07-8	Endosulfan sulfate	ug/L		ND	0.10	1
50-29-3	4,4'-DDT	ug/L		ND	0.10	1
72-43-5	Methoxychlor	ug/L		ND	0.10	1
53494-70-5	Endrin ketone	ug/L		ND	0.50	1
7421-93-4	Endrin aldehyde	ug/L		ND	0.10	1
5103-71-9	alpha Chlordane	ug/L		ND	0.10	1
5103-74-2	gamma Chlordane	ug/L		ND	0.05	1
8001-35-2	Toxaphene	ug/L		ND	0.05	1
					1.0	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	33.1	(13 - 154%)
Decachlorobiphenyl	51.3	(25 - 140%)

RL = Reporting Limit

Login #L9811172
November 23, 1998 03:19 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811172-01
Client Sample ID: WEIR 1109A
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/09/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/11/98
Analysis Date: 11/13/98 Time: 12:21

Instrument: HPMS7
Analyst: MLS
Lab File ID: 6458

Method: 8270C\3510C
Run ID: R56494
Batch : WG49371

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L		ND	10	2
111-44-4	Bis(2-Chloroethyl)ether	ug/L		ND	10	2
95-57-8	2-Chlorophenol	ug/L		ND	10	2
541-73-1	1,3-Dichlorobenzene	ug/L		ND	10	2
106-46-7	1,4-Dichlorobenzene	ug/L		ND	10	2
95-50-1	1,2-Dichlorobenzene	ug/L		ND	10	2
95-48-7	2-Methylphenol	ug/L		ND	10	2
108-60-1	bis(2-Chloroisopropyl)ether	ug/L		ND	10	2
106-44-5	4-Methylphenol	ug/L		ND	10	2
621-64-7	N-Nitroso-di-n-propylamine	ug/L		ND	10	2
67-72-1	Hexachloroethane	ug/L		ND	10	2
98-95-3	Nitrobenzene	ug/L		ND	10	2
78-59-1	Isophorone	ug/L		ND	10	2
88-75-5	2-Nitrophenol	ug/L		ND	10	2
105-67-9	2,4-Dimethylphenol	ug/L		ND	10	2
111-91-1	Bis(2-Chloroethoxy)Methane	ug/L		ND	10	2
120-83-2	2,4-Dichlorophenol	ug/L		ND	10	2
120-82-1	1,2,4-Trichlorobenzene	ug/L		ND	10	2
91-20-3	Naphthalene	ug/L		ND	10	2
106-47-8	4-Chloroaniline	ug/L		ND	10	2
87-68-3	Hexachlorobutadiene	ug/L		ND	10	2
59-50-7	4-Chloro-3-methylphenol	ug/L		ND	10	2
91-57-6	2-Methylnaphthalene	ug/L		ND	10	2
77-47-4	Hexachlorocyclopentadiene	ug/L		ND	10	2
88-06-2	2,4,6-Trichlorophenol	ug/L		ND	10	2
95-95-4	2,4,5-Trichlorophenol	ug/L		ND	50	2
91-58-7	2-Chloronaphthalene	ug/L		ND	10	2
88-74-4	2-Nitroaniline	ug/L		ND	50	2
131-11-3	Dimethylphthalate	ug/L		ND	10	2
208-96-8	Acenaphthylene	ug/L		ND	10	2
606-20-2	2,6-Dinitrotoluene	ug/L		ND	10	2
99-09-2	3-Nitroaniline	ug/L		ND	50	2
83-32-9	Acenaphthene	ug/L		ND	10	2
51-28-5	2,4-Dinitrophenol	ug/L		ND	50	2
100-02-7	4-Nitrophenol	ug/L		ND	50	2
132-64-9	Dibenzofuran	ug/L		ND	10	2
121-14-2	2,4-Dinitrotoluene	ug/L		ND	10	2
84-66-2	Diethylphthalate	ug/L		ND	10	2
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L		ND	10	2

RL = Reporting Limit

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811172-01
Client Sample ID: WEIR 1109A
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/11/98
Analysis Date: 11/13/98 Time: 12:21

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/09/98

Instrument: HPMS7
Analyst: MLS
Lab File ID: 6458

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8270C\3510C
Run ID: R56494
Batch : WG49371

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L		ND	10	2
100-01-6	4-Nitroaniline	ug/L		ND	50	2
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	50	2
86-30-6	N-Nitrosodiphenylamine	ug/L		ND	10	2
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	10	2
118-74-1	Hexachlorobenzene	ug/L		ND	10	2
87-86-5	Pentachlorophenol	ug/L		ND	50	2
85-01-8	Phenanthrene	ug/L		ND	10	2
120-12-7	Anthracene	ug/L		ND	10	2
86-74-8	Carbazole	ug/L		ND	10	2
84-74-2	Di-N-Butylphthalate	ug/L		ND	10	2
206-44-0	Fluoranthene	ug/L		ND	10	2
129-00-0	Pyrene	ug/L		ND	10	2
85-68-7	Butylbenzylphthalate	ug/L		ND	10	2
91-94-1	3,3'-Dichlorobenzidine	ug/L		ND	20	2
56-55-3	Benzo(a)anthracene	ug/L		ND	10	2
218-01-9	Chrysene	ug/L		ND	10	2
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	10	2
117-84-0	Di-n-octylphthalate	ug/L		ND	10	2
205-99-2	Benzo(b)fluoranthene	ug/L		ND	10	2
207-08-9	Benzo(k)fluoranthene	ug/L		ND	10	2
50-32-8	Benzo(a)pyrene	ug/L		ND	10	2
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L		ND	10	2
53-70-3	Dibenzo(a,h)Anthracene	ug/L		ND	10	2
191-24-2	Benzo(g,h,i)Perylene	ug/L		ND	10	2

SURROGATES- In Percent Recovery:

2-Fluorophenol	37.9	(21 - 100%)
Phenol-d5	23.0	(10 - 94%)
Nitrobenzene-d5	54.7	(35 - 114%)
2-Fluorobiphenyl	61.7	(43 - 116%)
2,4,6-Tribromophenol	107	(10 - 123%)
p-Terphenyl-d14	117	(33 - 141%)

RL = Reporting Limit

Login #L9811172
November 23, 1998 03:19 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811172-01
Client Sample ID: WEIR 1109A
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/09/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/19/98 Time: 18:43

Instrument: HPMS9
Analyst: SLT
Lab File ID: 9VR00364

Method: 8260B
Run ID: R56562
Batch : WG49590

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/L		ND	10	1
74-83-9	Bromomethane	ug/L		ND	10	1
75-01-4	Vinyl chloride	ug/L		ND	10	1
75-00-3	Chloroethane	ug/L		ND	10	1
75-09-2	Methylene chloride	ug/L		ND	5.0	1
67-64-1	Acetone	ug/L		ND	10	1
75-15-0	Carbon disulfide	ug/L		ND	5.0	1
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1
75-34-3	1,1-Dichloroethane	ug/L		ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L		ND	5.0	1
67-66-3	Chloroform	ug/L		ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	1
78-93-3	2-Butanone	ug/L		ND	10	1
71-55-6	1,1,1-Trichloroethane	ug/L		ND	5.0	1
56-23-5	Carbon tetrachloride	ug/L		ND	5.0	1
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	1
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	1
79-01-6	Trichloroethene	ug/L		ND	5.0	1
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1
71-43-2	Benzene	ug/L		ND	5.0	1
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	1
75-25-2	Bromoform	ug/L		ND	5.0	1
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	1
591-78-6	2-Hexanone	ug/L		ND	10	1
127-18-4	Tetrachloroethene	ug/L		ND	5.0	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0	1
108-88-3	Toluene	ug/L		ND	5.0	1
108-90-7	Chlorobenzene	ug/L		ND	5.0	1
100-41-4	Ethyl benzene	ug/L		ND	5.0	1
100-42-5	Styrene	ug/L		ND	5.0	1
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1

SURROGATES- In Percent Recovery:

Dibromofluoromethane	103	(86 - 118%)
1,2-Dichloroethane-d4	96.7	(80 - 120%)
Toluene-d8	95.3	(88 - 110%)
p-Bromofluorobenzene	92.2	(86 - 115%)

RL = Reporting Limit

Lab Sample ID: L9811172-02
Client Sample ID: WEIR 1109B
Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water
Collected: 11/09/98 0930

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	31		5.0	1	N/A	DLN	11/10/98	09:16	160.2

Lab Sample ID: L9811172-03
Client Sample ID: WEIR 1107
Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water
Collected: 11/09/98 0930

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	26		5.0	1	N/A	DLN	11/10/98	09:16	160.2

Lab Sample ID: L9811172-04
Client Sample ID: WEIR 1106
Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water
Collected: 11/09/98 0930

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	27		5.0	1	N/A	DLN	11/10/98	09:16	160.2

Lab Sample ID: L9811172-05
Client Sample ID: MIX 1109
Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water
Collected: 11/09/98 1000

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	29		5.0	1	N/A	DLN	11/10/98	09:16	160.2

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811172-05
Client Sample ID: MIX 1109
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/12/98
Analysis Date: 11/13/98 Time: 20:07

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/09/98

Instrument: HP10
Analyst: CDB
Lab File ID: 019F0101

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

Method: 8082/3550
Run ID: R56396
Batch : WG49301

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.60	1.2
11104-28-2	Aroclor-1221	ug/L		ND	0.60	1.2
11141-16-5	Aroclor-1232	ug/L		ND	0.60	1.2
53469-21-9	Aroclor-1242	ug/L		ND	0.60	1.2
12672-29-6	Aroclor-1248	ug/L		ND	0.60	1.2
11097-69-1	Aroclor-1254	ug/L		ND	1.2	1.2
11096-82-5	Aroclor-1260	ug/L		ND	1.2	1.2

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	75.8	(13 - 154%)
Decachlorobiphenyl	55.8	(25 - 140%)

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811172-05
Client Sample ID: MIX 1109
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/12/98
Analysis Date: 11/14/98 Time:

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/09/98

Instrument: HP9
Analyst: ECL
Lab File ID: 1382

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

Method: 8081A\3510C
Run ID: R56335
Batch : WG49308

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L		ND	0.055	1.1
319-85-7	beta-BHC	ug/L		ND	0.055	1.1
319-86-8	delta-BHC	ug/L		ND	0.055	1.1
58-89-9	gamma-BHC (Lindane)	ug/L		ND	0.055	1.1
76-44-8	Heptachlor	ug/L		ND	0.055	1.1
309-00-2	Aldrin	ug/L		ND	0.055	1.1
1024-57-3	Heptachlor epoxide	ug/L		ND	0.055	1.1

RL = Reporting Limit

KEMRON ENVIR[illegible]ENTAL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811172-05
Client Sample ID: MIX 1109
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/12/98
Analysis Date: 11/14/98 Time:

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/09/98

Instrument: HP9
Analyst: ECL
Lab File ID: 1382

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

Method: 8081A\3510C
Run ID: R56335
Batch : WG49308

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
959-98-8	Endosulfan I	ug/L		ND	0.055	1.1
60-57-1	Dieldrin	ug/L		ND	0.11	1.1
72-55-9	4,4'-DDE	ug/L		ND	0.11	1.1
72-20-8	Endrin	ug/L		ND	0.11	1.1
33213-65-9	Endosulfan II	ug/L		ND	0.11	1.1
72-54-8	4,4'-DDD	ug/L		ND	0.11	1.1
1031-07-8	Endosulfan sulfate	ug/L		ND	0.11	1.1
50-29-3	4,4'-DDT	ug/L		ND	0.11	1.1
72-43-5	Methoxychlor	ug/L		ND	0.55	1.1
53494-70-5	Endrin ketone	ug/L		ND	0.11	1.1
7421-93-4	Endrin aldehyde	ug/L		ND	0.11	1.1
5103-71-9	alpha Chlordane	ug/L		ND	0.055	1.1
5103-74-2	gamma Chlordane	ug/L		ND	0.055	1.1
8001-35-2	Toxaphene	ug/L		ND	1.1	1.1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	63.5	(13 - 154%)
Decachlorobiphenyl	67.4	(25 - 140%)

RL = Reporting Limit

Login #L9811172
November 23, 1998 03:19 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811172-05
Client Sample ID: MIX 1109
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/09/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/11/98
Analysis Date: 11/13/98 Time: 13:00

Instrument: HPMS7
Analyst: MLS
Lab File ID: 6459

Method: 8270C\3510C
Run ID: R56494
Batch : WG49371

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L		ND	10	2
111-44-4	Bis(2-Chloroethyl)ether	ug/L		ND	10	2
95-57-8	2-Chlorophenol	ug/L		ND	10	2
541-73-1	1,3-Dichlorobenzene	ug/L		ND	10	2
106-46-7	1,4-Dichlorobenzene	ug/L		ND	10	2
95-50-1	1,2-Dichlorobenzene	ug/L		ND	10	2
95-48-7	2-Methylphenol	ug/L		ND	10	2
108-60-1	bis(2-Chloroisopropyl)ether	ug/L		ND	10	2
106-44-5	4-Methylphenol	ug/L		ND	10	2
621-64-7	N-Nitroso-di-n-propylamine	ug/L		ND	10	2
67-72-1	Hexachloroethane	ug/L		ND	10	2
98-95-3	Nitrobenzene	ug/L		ND	10	2
78-59-1	Isophorone	ug/L		ND	10	2
88-75-5	2-Nitrophenol	ug/L		ND	10	2
105-67-9	2,4-Dimethylphenol	ug/L		ND	10	2
111-91-1	Bis(2-Chloroethoxy)Methane	ug/L		ND	10	2
120-83-2	2,4-Dichlorophenol	ug/L		ND	10	2
120-82-1	1,2,4-Trichlorobenzene	ug/L		ND	10	2
91-20-3	Naphthalene	ug/L		ND	10	2
106-47-8	4-Chloroaniline	ug/L		ND	10	2
87-68-3	Hexachlorobutadiene	ug/L		ND	10	2
59-50-7	4-Chloro-3-methylphenol	ug/L		ND	10	2
91-57-6	2-Methylnaphthalene	ug/L		ND	10	2
77-47-4	Hexachlorocyclopentadiene	ug/L		ND	10	2
88-06-2	2,4,6-Trichlorophenol	ug/L		ND	10	2
95-95-4	2,4,5-Trichlorophenol	ug/L		ND	50	2
91-58-7	2-Chloronaphthalene	ug/L		ND	10	2
88-74-4	2-Nitroaniline	ug/L		ND	50	2
131-11-3	Dimethylphthalate	ug/L		ND	10	2
208-96-8	Acenaphthylene	ug/L		ND	10	2
606-20-2	2,6-Dinitrotoluene	ug/L		ND	10	2
99-09-2	3-Nitroaniline	ug/L		ND	50	2
83-32-9	Acenaphthene	ug/L		ND	10	2
51-28-5	2,4-Dinitrophenol	ug/L		ND	50	2
100-02-7	4-Nitrophenol	ug/L		ND	50	2
132-64-9	Dibenzofuran	ug/L		ND	10	2
121-14-2	2,4-Dinitrotoluene	ug/L		ND	10	2
84-66-2	Diethylphthalate	ug/L		ND	10	2
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L		ND	10	2

RL = Reporting Limit

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811172-05
Client Sample ID: MIX 1109
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/09/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/11/98
Analysis Date: 11/13/98 Time: 13:00

Instrument: HPMS7
Analyst: MLS
Lab File ID: 6459

Method: 8270C\3510C
Run ID: R56494
Batch : WG49371

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L		ND	10	2
100-01-6	4-Nitroaniline	ug/L		ND	50	2
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	50	2
86-30-6	N-Nitrosodiphenylamine	ug/L		ND	10	2
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	10	2
118-74-1	Hexachlorobenzene	ug/L		ND	10	2
87-86-5	Pentachlorophenol	ug/L		ND	50	2
85-01-8	Phenanthrene	ug/L		ND	10	2
120-12-7	Anthracene	ug/L		ND	10	2
86-74-8	Carbazole	ug/L		ND	10	2
84-74-2	Di-N-Butylphthalate	ug/L		ND	10	2
206-44-0	Fluoranthene	ug/L		ND	10	2
129-00-0	Pyrene	ug/L		ND	10	2
85-68-7	Butylbenzylphthalate	ug/L		ND	10	2
91-94-1	3,3'-Dichlorobenzidine	ug/L		ND	20	2
56-55-3	Benzo(a)anthracene	ug/L		ND	10	2
218-01-9	Chrysene	ug/L		ND	10	2
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	10	2
117-84-0	Di-n-octylphthalate	ug/L		ND	10	2
205-99-2	Benzo(b)fluoranthene	ug/L		ND	10	2
207-08-9	Benzo(k)fluoranthene	ug/L		ND	10	2
50-32-8	Benzo(a)pyrene	ug/L		ND	10	2
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L		ND	10	2
53-70-3	Dibenzo(a,h)Anthracene	ug/L		ND	10	2
191-24-2	Benzo(g,h,i)Perylene	ug/L		ND	10	2

SURROGATES- In Percent Recovery:

2-Fluorophenol	38.1	(21 - 100%)
Phenol-d5	22.5	(10 - 94%)
Nitrobenzene-d5	57.9	(35 - 114%)
2-Fluorobiphenyl	66.5	(43 - 116%)
2,4,6-Tribromophenol	96.8	(10 - 123%)
p-Terphenyl-d14	107	(33 - 141%)

RL = Reporting Limit

Login #L9811172
November 23, 1998 03:19 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811172-05
Client Sample ID: MIX 1109
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/19/98 Time: 19:19

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/09/98

Instrument: HPMS9
Analyst: SLT
Lab File ID: 9VR00365

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8260B
Run ID: R56562
Batch : WG49590

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/L		ND	10	1
74-83-9	Bromomethane	ug/L		ND	10	1
75-01-4	Vinyl chloride	ug/L		ND	10	1
75-00-3	Chloroethane	ug/L		ND	10	1
75-09-2	Methylene chloride	ug/L		ND	5.0	1
67-64-1	Acetone	ug/L		ND	10	1
75-15-0	Carbon disulfide	ug/L		ND	5.0	1
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1
75-34-3	1,1-Dichloroethane	ug/L		ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L		ND	5.0	1
67-66-3	Chloroform	ug/L		ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	1
78-93-3	2-Butanone	ug/L		ND	10	1
71-55-6	1,1,1-Trichloroethane	ug/L		ND	5.0	1
56-23-5	Carbon tetrachloride	ug/L		ND	5.0	1
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	1
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	1
79-01-6	Trichloroethene	ug/L		ND	5.0	1
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1
71-43-2	Benzene	ug/L		ND	5.0	1
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	1
75-25-2	Bromoform	ug/L		ND	5.0	1
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	1
591-78-6	2-Hexanone	ug/L		ND	10	1
127-18-4	Tetrachloroethene	ug/L		ND	5.0	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0	1
108-88-3	Toluene	ug/L		ND	5.0	1
108-90-7	Chlorobenzene	ug/L		ND	5.0	1
100-41-4	Ethyl benzene	ug/L		ND	5.0	1
100-42-5	Styrene	ug/L		ND	5.0	1
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1

SURROGATES- In Percent Recovery:

Dibromofluoromethane	101	(86 - 118%)
1,2-Dichloroethane-d4	93.9	(80 - 120%)
Toluene-d8	94.7	(88 - 110%)
p-Bromofluorobenzene	92.7	(86 - 115%)

RL = Reporting Limit

Order #: 98-11-172
November 23, 1998 03:19 pm

KEMRON ENVIRONMENTAL SERVICES
WORK GROUPS

Work Group	Run ID	Sample	Dil Type	Matrix	Product	Method	Analyst	Date Collected	Run Date	Run Time	Department
WG49178	R56020	L9811172-01		Water	Total Suspended Solids	160.2	DLN	09-NOV-1998	10-NOV-1998	09:16	Conventionals
WG49178	R56020	L9811172-02		Water	Total Suspended Solids	160.2	DLN	09-NOV-1998	10-NOV-1998	09:16	Conventionals
WG49178	R56020	L9811172-03		Water	Total Suspended Solids	160.2	DLN	09-NOV-1998	10-NOV-1998	09:16	Conventionals
WG49178	R56020	L9811172-04		Water	Total Suspended Solids	160.2	DLN	09-NOV-1998	10-NOV-1998	09:16	Conventionals
WG49178	R56020	L9811172-05		Water	Total Suspended Solids	160.2	DLN	09-NOV-1998	10-NOV-1998	09:16	Conventionals
WG49216	R56494	L9811172-01		Water	TCL Semivolatiles	8270C\3510C	MLS	09-NOV-1998	13-NOV-1998	12:21	Extraction
WG49216	R56494	L9811172-05		Water	TCL Semivolatiles	8270C\3510C	MLS	09-NOV-1998	13-NOV-1998	13:00	Extraction
WG49246	R56335	L9811172-01		Water	Organochlorine Pesticides	8081A\3510C	ECL	09-NOV-1998	14-NOV-1998		Extraction
WG49246	R56335	L9811172-05		Water	Organochlorine Pesticides	8081A\3510C	ECL	09-NOV-1998	14-NOV-1998		Extraction
WG49247	R56396	L9811172-01		Water	PCB's (Water)	8082/3550	CDB	09-NOV-1998	13-NOV-1998	19:32	Extraction
WG49247	R56396	L9811172-05		Water	PCB's (Water)	8082/3550	CDB	09-NOV-1998	13-NOV-1998	20:07	Extraction
WG49301	R56396	L9811172-01		Water	PCB's (Water)	8082/3550	CDB	09-NOV-1998	13-NOV-1998	19:32	Semivolatile - GC
WG49301	R56396	L9811172-05		Water	PCB's (Water)	8082/3550	CDB	09-NOV-1998	13-NOV-1998	20:07	Semivolatile - GC
WG49308	R56335	L9811172-01		Water	Organochlorine Pesticides	8081A\3510C	ECL	09-NOV-1998	14-NOV-1998		Semivolatile - GC
WG49308	R56335	L9811172-05		Water	Organochlorine Pesticides	8081A\3510C	ECL	09-NOV-1998	14-NOV-1998		Semivolatile - GC
WG49371	R56494	L9811172-01		Water	TCL Semivolatiles	8270C\3510C	MLS	09-NOV-1998	13-NOV-1998	12:21	Semivolatile - GC/MS
WG49371	R56494	L9811172-05		Water	TCL Semivolatiles	8270C\3510C	MLS	09-NOV-1998	13-NOV-1998	13:00	Semivolatile - GC/MS
WG49590	R56562	L9811172-01		Water	TCL Volatiles	8260B	SLT	09-NOV-1998	19-NOV-1998	18:43	Volatile - GC/MS
WG49590	R56562	L9811172-05		Water	TCL Volatiles	8260B	SLT	09-NOV-1998	19-NOV-1998	19:19	Volatile - GC/MS

KEMRON ANALYST LIST

Ohio Valley Laboratory

10/28/98

ALC - - Ann L. Clark
BAD - - Becky A. Diehl
CEB - - Chad E. Barnes
CDB - - Christy D. Burton
CLH - - Chris L. Hurst
CMS - - Crystal M. Stevens
CRC - - Carla R. Cochran
DIH - - Deanna I. Hesson
DKM - - Dewey K. Miller
DLN - - Deanna L. Norton
DLP - - Dorothy L. Payne
ECL - - Eric C. Lawson
FEH - - Fay E. Harmon
HV - - Hema Vilasagar
JLH - - Janice L. Holland
JWR - - John W. Richards
JYH - - Ji Y. Hu
KHA - - Kim H. Archer
KMS - - Kevin M. Stutler
KRA - - Kathy R. Albertson
MDA - - Mike D. Albertson
MDC - - Michael D. Cochran
MES - - Mary E. Schiling
MLS - - Michael L. Schimmel
MMB - - Maren M. Beery
RDC - - Rebecca D. Cutlip
RDS - - Rebecca D. Sutton
REF - - Ron E. Fertile
REK - - Robert E. Kyer
RSS - - Regina S. Simmons
RWC - - Rodney W. Campbell
SJK - - Sindy J. Kinney
SJM - - Shawn J. Marshall
SLP - - Sheri L. Pfalzgraf
SLT - - Stephanie L. Tepe
SMW - - Shauna M. Welch
SPL - - Steve P. Learn
TJW - - Thomas J. Ware
TRS - - Todd R. Stack
VC - - Vicki Collier
VMN - - Vincent M. Nedeff

KEMRON Environmental Services, Inc.
LIST OF VALID QUALIFIERS (qual)
March 9, 1998

Qualifier	Description
(A)	See the report narrative
(B)	See the report narrative
(C)	See the report narrative
+	Correlation coefficient for the MSA is less than 0.995
<	Less than
>	Greater than
B	Present in the method blank
C	Confirmed by GC/MS
*	Surrogate or spike compound out of range
CG	Confluent growth
D	The analyte was quantified at a secondary dilution factor
DL	Surrogate or spike was diluted out
E	Estimated concentration due to sample matrix interference
F	Present below nominal reporting limit (AFCEE only)
FL	Free liquid
I	Semiquantitative result, out of instrument calibration range
J	Present below nominal reporting limit
L	Sample reporting limits elevated due to matrix interference
M	Duplicate injection precision not met

Qualifier	Description
N	Tentatively Identified Compound (TIC)
NA	Not applicable
ND	Not detected at or above the reporting limit (RL)
NF	Not found
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentration > 25% difference between the two GC columns
QNS	Quantity not sufficient to perform analysis
R	Analyte exceeds regulatory limit
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TNTC	Too numerous to count
U	Analyzed for but not detected
W	Post-digestion spike for furnace AA out of control limits
X	Can not be resolved from isomer. See below.

Special Notes for Organic Analytes

1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

INORGANIC QA/QC

KEMRON
ENVIRONMENTAL SERVICES

KEMRON ENVIRONMENTAL SERVICES
OHIO VALLEY LABORATORY
QUALITY CONTROL SUMMARY

WORKGROUP:	wg49178	**RUN DATE:**	11/10/98
METHOD:	160.2	**ANALYST:**	dln
MATRIX:	Water	**DUPLICATE:**	11-144-03
UNITS:	mg/L		

ANALYTE	RDL	Blank	T-LCS	LCS	REP1	REP2	SAMPLE RESULT	T-MS	MS	PERCENT RECOVERY LCS	LCS LCL	LCS UCL	MS	MS LCL	MS UCL	PERCENT RPD REP RPD	RPD UCL
TSS	5.00	ND	50.00	50.00	ND	ND	NR	NR	NR	100.0	81.0	114.5	NR	NR	NR	NA	20.00

NOTES & DEFINITIONS :

RDL = REPORTING DETECTION LIMIT
DL = DILUTED OUT
NA = NOT APPLICABLE
ND = NOT DETECTED
NR = NOT REQUIRED

LCS = LABORATORY CONTROL SAMPLE
T- LCS = TRUE VALUE OF LCS
REP1 = UNSPIKED SAMPLE REPLICATE 1
REP2 = UNSPIKED SAMPLE REPLICATE 2
SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX
T-MS = TRUE VALUE OF MATRIX SPIKE
MS = MATRIX SPIKE
LCL = LOWER CONTROL LIMIT
UCL = UPPER CONTROL LIMIT

REP RPD = RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES

ORGANIC QA/QC

KEMRON ENVIRONMENTAL SERVICES , OVL
SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP : WG49371
METHOD : 8270
MATRIX : WATER
CONCENTRATION UNITS : UG/L
PREP WORK GRP : WG49215

EXT DATE : 11/11/98
BENCH SHEET : V104P99
BLK FLNM : 6456
LCS FLNM: 6457

RUN DATE : 11/13/98
SMPL ID : L9811209-01 WATER
SMPL FLNM : 9/7/17
MS FLNM : 9/8/17
MSD FLNM : 9/9/17

INSTRUMENT : HPMS7
ANALYST : MLS

ANALYTE	RDL	BLANK	LCS SPIKE ADDED	LCS	SAMPLE	MS SPIKE ADDED	MS	MSD	BLANK	LCS	LCS LCL	LCS UCL	SAMPLE	MS	MSD	MS LCL	MS UCL	MSD RPD	RPD UCL	BEYOND RPD LIMIT	SAMPLE	BLANK	LCS	MS	MSD
	CONCENTRATION , ug/L								PERCENT RECOVERY , %									PERCENT			BEYOND LIMITS				
DIETHYLPHTHALATE	5.0	ND	100	94.3	ND	100	83.2	105.5	NA	94.3	5	114	NA	83.2	105.5	5	114	24	40						
FLUORENE	5.0	ND	100	75.8	ND	100	71.5	92.0	NA	75.8	25	158	NA	71.5	92.0	25	158	25	40						
4-CHLOROPHENYL-PHENYL ETHE	5.0	ND	100	68.9	ND	100	66.6	86.4	NA	68.9	59	121	NA	66.6	86.4	59	121	26	40						
4-NITROANILINE	25.0	ND	100	96.1	ND	100	87.2	101.3	NA	96.1	5	150	NA	87.2	101.3	5	150	15	40						
1,2-DIPHENYLHYDRAZINE *	5.0	ND	100	64.4	ND	100	60.0	78.4	NA	64.4	5	150	NA	60.0	78.4	5	150	27	40						
4,6-DINITRO-2-METHYLPHENOL	25.0	ND	100	91.4	ND	100	77.5	91.6	NA	91.4	5	181	NA	77.5	91.6	5	181	17	40						
N-NITROSODIPHENYLAMINE **	5.0	ND	100	96.3	ND	100	87.1	105.7	NA	96.3	5	150	NA	87.1	105.7	5	150	19	40						
4-BROMOPHENYL-PHENYL ETHE	5.0	ND	100	71.6	ND	100	65.5	83.7	NA	71.6	53	127	NA	65.5	83.7	53	127	24	40						
HEXACHLOROBENZENE	5.0	ND	100	93.3	ND	100	81.6	102.6	NA	93.3	5	152	NA	81.6	102.6	5	152	23	40						
PENTACHLOROPHENOL	25.0	ND	100	89.9	ND	100	82.0	94.1	NA	89.9	14	176	NA	82.0	94.1	14	176	14	40						
PHENANTHRENE	5.0	ND	100	106.1	ND	100	94.1	112.2	NA	106.1	54	120	NA	94.1	112.2	54	120	18	40						
ANTHRACENE	5.0	ND	100	106.5	ND	100	93.4	111.5	NA	106.5	27	133	NA	93.4	111.5	27	133	18	40						
CARBAZOLE	5.0	ND	100	134.5	ND	100	114.6	133.7	NA	134.5	5	150	NA	114.6	133.7	5	150	15	40						
DI-N-BUTYLPHTHALATE	5.0	ND	100	119.7	ND	100	106.2	121.0	NA	119.7	1	118	NA	106.2	121.0	1	118	13	40				H		H
FLUORANTHENE	5.0	ND	100	122.4	ND	100	109.9	123.4	NA	122.4	26	137	NA	109.9	123.4	26	137	12	40						
PYRENE	5.0	ND	100	112.5	ND	100	98.8	111.5	NA	112.5	52	115	NA	98.8	111.5	52	115	12	40						
BUTYLBENZYLPHTHALATE	5.0	ND	100	118.8	ND	100	104.4	117.7	NA	118.8	5	152	NA	104.4	117.7	5	152	12	40						
BENZO(A)ANTHRACENE	10.0	ND	100	112.1	ND	100	99.7	112.2	NA	112.1	5	262	NA	99.7	112.2	5	262	12	40						
3,3'-DICHLOROBENZIDINE	5.0	ND	100	79.2	ND	100	98.9	123.7	NA	79.2	33	143	NA	98.9	123.7	33	143	22	40						
CHRYSENE	5.0	ND	100	110.1	ND	100	97.6	110.3	NA	110.1	17	168	NA	97.6	110.3	17	168	12	40						
BIS(2-ETHYLHEXYL)PHTHALATE	5.0	ND	100	116.6	ND	100	102.6	115.0	NA	116.6	8	158	NA	102.6	115.0	8	158	11	40						
DI-N-OCTYLPHTHALATE	5.0	ND	100	121.5	ND	100	105.2	121.5	NA	121.5	4	146	NA	105.2	121.5	4	146	14	40						
BENZO(B)FLUORANTHENE	5.0	ND	100	121.6	ND	100	100.3	123.2	NA	121.6	24	159	NA	100.3	123.2	24	159	20	40						
BENZO(K)FLUORANTHENE	5.0	ND	100	118.0	ND	100	108.1	118.9	NA	118.0	11	162	NA	108.1	118.9	11	162	10	40						
BENZO(A)PYRENE	5.0	ND	100	115.4	ND	100	98.7	115.8	NA	115.4	17	163	NA	98.7	115.8	17	163	16	40						
INDENO(1,2,3-CD)PYRENE	5.0	ND	100	90.8	ND	100	77.9	90.9	NA	90.8	5	171	NA	77.9	90.9	5	171	15	40						
DIBENZ(A,H)ANTHRACENE	5.0	ND	100	97.4	ND	100	84.2	98.4	NA	97.4	5	227	NA	84.2	98.4	5	227	15	40						
BENZO(G,H,I)PERYLENE	5.0	ND	100	86.4	ND	100	73.0	84.5	NA	86.4	5	219	NA	73.0	84.5	5	219	15	40						
SURROGATES																									
2-FLUOROPHENOL		49.1	100	31.9	37.3	100	31.1	32.7	49.1	31.9	21	100	37.3	31.1	32.7	21	100								
PHENOL - D6		30.7	100	20.2	23.4	100	20.8	21.2	30.7	20.2	10	94	23.4	20.8	21.2	10	94								
NITROBENZENE - D5		35.8	50	26.0	30.4	50	26.3	27.5	71.7	52.0	35	114	60.7	52.6	55.0	35	114								
2-FLUOROBIPHENYL		41.6	50	30.7	34.8	50	32.2	35.3	83.0	61.3	43	116	69.3	64.4	70.5	43	116								
2,4,6-TRIBROMOPHENOL		106.0	100	103.6	80.2	100	93.9	113.2	106.0	103.6	10	123	80.2	93.9	113.2	10	123								
p-TERPHENYL - D14		71.9	50	64.6	38.7	50	67.4	63.7	143.7	129.3	33	141	73.4	114.8	127.4	33	141					H			

NOTES & DEFINITIONS : NS = NOT SPIKED

KEMRON ENVIRONMENTAL SERVICES

MARIETTA, OH

QUALITY CONTROL SUMMARY / 8081 WATERS , FRONT

INSTRUMENT : HP9 — SAMPLE ID : NA

EXT'N DATE : 11/12/98 — ANALYST : ECL — BLK FLNM : 1374 — SMPL FLNM : NA

EXT'N BENCH SHT : V105P03 — RUN DATE : 11/13/98 — LCS FLNM : 1375 — MS FLNM : NA

EXT'N WORK GRP : WG49246 — ANAL WORK GRP : WG49308 — MSD FLNM : NA

COMPOUND	RDL	CONCENTRATION , ug/L					% RECOVERY							PERCENT				
		Blank	LCS	Sample	MS	MSD	Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	MS/MSD RPD	RPD Advisory Limits	Blank LCS Sample MS MSD
ALPHA-BHC	0.05	ND	0.357	I ND	NA	NA	NA	71.4	37	134	NA	#######	#######	51	145	NA	0-43	# #
GAMMA-BHC	0.05	ND	0.404	I ND	NA	NA	NA	80.8	32	127	NA	#######	#######	54	134	NA	0-38	# #
BETA-BHC	0.05	ND	0.447	I ND	NA	NA	NA	89.4	17	147	NA	#######	#######	51	129	NA	0-28	# #
HEPTACHLOR	0.05	ND	0.374	I ND	NA	NA	NA	74.8	34	111	NA	#######	#######	40	139	NA	0-37	# #
DELTA-BHC	0.05	ND	0.473	I ND	NA	NA	NA	94.6	19	140	NA	#######	#######	56	138	NA	0-78	# #
ALDRIN	0.05	ND	0.375	I ND	NA	NA	NA	75.0	42	122	NA	#######	#######	28	143	NA	0-88	# #
HEPTACHLOR EPOXIDE	0.05	ND	0.429	I ND	NA	NA	NA	85.8	37	142	NA	#######	#######	51	135	NA	0-40	# #
GAMMA-CHLORDANE	0.05	ND	NA	I ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40	
ALPHA-CHLORDANE	0.05	ND	NA	I ND	NA	NA	NA	NA	54	119	NA	NA	NA	45	115	NA	0-17	
ENDOSULFAN I	0.05	ND	0.367	I ND	NA	NA	NA	73.4	45	153	NA	#######	#######	37	123	NA	0-22	# #
4,4-DDE	0.10	ND	0.439	I ND	NA	NA	NA	87.8	30	145	NA	#######	#######	64	152	NA	0-23	# #
DIELDRIN	0.10	ND	0.462	I ND	NA	NA	NA	92.4	36	146	NA	#######	#######	23	171	NA	0-20	# #
ENDRIN	0.10	ND	0.461	I ND	NA	NA	NA	92.2	30	147	NA	#######	#######	56	154	NA	0-28	# #
4,4-DDD	0.10	ND	0.470	I ND	NA	NA	NA	94.0	31	141	NA	#######	#######	56	179	NA	0-86	# #
ENDOSULFAN II	0.10	ND	0.358	I ND	NA	NA	NA	71.6	D	202	NA	#######	#######	21	117	NA	0-18	# #
4,4-DDT	0.10	ND	0.479	I ND	NA	NA	NA	95.8	25	160	NA	#######	#######	42	168	NA	0-22	# #
ENDRIN ALDEHYDE	0.10	ND	0.246	I ND	NA	NA	NA	49.2	NA	NA	NA	#######	#######	21	115	NA	0-40	# #
ENDOSULFAN SULFATE	0.10	ND	0.278	I ND	NA	NA	NA	55.6	26	144	NA	#######	#######	31	117	NA	0-30	# #
METHOXYCHLOR	0.50	ND	0.434	I ND	NA	NA	NA	86.8	NA	NA	NA	#######	#######	26	196	NA	0-19	# #
ENDRIN KETONE	0.10	ND	0.355	I ND	NA	NA	NA	71.0	NA	NA	NA	#######	#######	NA	NA	NA		
Tech-CHLORDANE	1.00	ND	NA	I ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40	
TOXAPHENE	1.00	ND	NA	I ND	NA	NA	NA	NA	41	126	NA	NA	NA	40	125	NA	0-40	
SURROGATES																		
2,4,5,6-TETRACHLORO-M-XYLENE		8.42	10.2	I NA	NA	NA	42.1	51.2	33	154	NA	NA	NA	18	154			
DECACHLOROBIPHENYL		17.9	17.2	I NA	NA	NA	89.4	86.0	25	140	NA	NA	NA	25	140			

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 0.5 ug/L — LCS=LABORATORY CONTROL SAMPLE

SURROGATES spiked at 20 ug/L — MS=MATRIX SPIKE

NA = NOT APPLICABLE — MSD=MATRIX SPIKE DUPLICATE

DL = DILUTED OUT

ND = NOT DETECTED

RDL=REPORTING DETECTION LIMIT

KEMRON ENVIRONMENTAL SERVICES

MARIETTA, OH

QUALITY CONTROL SUMMARY / 8081 WATERS , REAR

INSTRUMENT : HP9

EXT'N DATE : 11/12/98 ANALYST : ECL BLK FLNM : 1374 SAMPLE ID : NA

EXT'N BENCH SHT : V105P03 RUN DATE : 11/13/98 LCS FLNM : 1375 SMPL FLNM : NA

EXT'N WORK GRP : WG49246 ANAL WORK GRP : WG49308 MS FLNM : NA

MSD FLNM : NA

COMPOUND	RDL	CONCENTRATION , ug/L					% RECOVERY							PERCENT				
		Blank	LCS	Sample	MS	MSD	Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	MS/MSD RPD	RPD Advisory Limists	Blank LCS Sample MS MSD
ALPHA-BHC	0.05	ND	0.384	ND	NA	NA	NA	72.8	37	134	NA	#######	#######	51	145	NA	0-43	# #
GAMMA-BHC	0.05	ND	0.409	ND	NA	NA	NA	81.8	32	127	NA	#######	#######	54	134	NA	0-18	# #
BETA-BHC	0.05	ND	0.423	ND	NA	NA	NA	84.6	17	147	NA	#######	#######	51	129	NA	0-28	# #
HEPTACHLOR	0.05	ND	0.381	ND	NA	NA	NA	76.2	34	111	NA	#######	#######	40	139	NA	0-37	# #
DELTA-BHC	0.05	ND	0.475	ND	NA	NA	NA	95.0	19	140	NA	#######	#######	56	138	NA	0-78	# #
ALDRIN	0.05	ND	0.384	ND	NA	NA	NA	76.8	42	122	NA	#######	#######	28	143	NA	0-36	# #
HEPTACHLOR EPOXIDE	0.05	ND	0.443	ND	NA	NA	NA	88.6	37	142	NA	#######	#######	51	135	NA	0-40	# #
GAMMA-CHLORDANE	0.05	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40	
ALPHA-CHLORDANE	0.05	ND	NA	ND	NA	NA	NA	NA	54	119	NA	NA	NA	45	115	NA	0-17	
ENDOSULFAN I	0.05	ND	0.378	ND	NA	NA	NA	75.6	45	153	NA	#######	#######	37	123	NA	0-22	# #
4,4-DDE	0.10	ND	0.479	ND	NA	NA	NA	95.8	30	145	NA	#######	#######	64	152	NA	0-23	# #
DIELDRIN	0.10	ND	0.489	ND	NA	NA	NA	97.8	36	146	NA	#######	#######	23	171	NA	0-20	# #
ENDRIN	0.10	ND	0.434	ND	NA	NA	NA	86.8	30	147	NA	#######	#######	56	154	NA	0-28	# #
4,4-DDD	0.10	ND	0.472	ND	NA	NA	NA	94.4	31	141	NA	#######	#######	56	179	NA	0-30	# #
ENDOSULFAN II	0.10	ND	0.363	ND	NA	NA	NA	72.6	D	202	NA	#######	#######	21	117	NA	0-18	# #
4,4-DDT	0.10	ND	0.489	ND	NA	NA	NA	97.8	25	160	NA	#######	#######	42	168	NA	0-22	# #
ENDRIN ALDEHYDE	0.10	ND	0.264	ND	NA	NA	NA	52.8	NA	NA	NA	#######	#######	21	115	NA	0-40	# #
ENDOSULFAN SULFATE	0.10	ND	0.298	ND	NA	NA	NA	59.6	26	144	NA	#######	#######	31	117	NA	0-30	# #
METHOXYCHLOR	0.10	ND	0.477	ND	NA	NA	NA	95	NA	NA	NA	#######	#######	26	196	NA	0-19	# #
ENDRIN KETONE	0.50	ND	0.377	ND	NA	NA	NA	75	NA	NA	NA	#######	#######	NA	NA	NA		
Tech-CHLORDANE	1.0	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40	
TOXAPHENE	1.0	ND	NA	ND	NA	NA	NA	NA	41	126	NA	NA	NA	40	125	NA	0-40	
SURROGATES																		
2,4,5,6-TETRACHLORO-M-XYLENE		9.18	11.6	NA	NA	NA	45.9	58.2	13	154	NA	NA	NA	13	154			
DECACHLOROBIPHENYL		19.4	18.8	NA	NA	NA	96.8	94.0	25	140	NA	NA	NA	25	140			

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 0.5 ug/L

SURROGATES spiked at 20 ug/L

NA = NOT APPLICABLE

DL = DILUTED OUT

ND = NOT DETECTED

RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE

MS=MATRIX SPIKE

MSD=MATRIX SPIKE DUPLICATE

KEMRON ENVIRONMENTAL SERVICES
MARIETTA, OH
QUALITY CONTROL SUMMARY / PCB WATERS , FRONT

		INSTRUMENT : HP10			SMPL ID : 11-223-01
EXT'N DATE : 11/12/98		ANALYST : CDB	BLK FLNM : 016F0101		SMPL FLNM : 020F0101
EXT'N BENCH SHT : V105P04		RUN DATE : 11/13/98	LCS FLNM : 017F0101		MS FLNM : 021F0101
EXT'N WORK GRP : WG49247		ANAL WORK GRP : WG49301	LCS Dup FLNM : NA		MSD FLNM : 022F0101

COMPOUND	RDL	CONCENTRATION , ug/L					% RECOVERY									PERCENT						
		Blank	LCS	Sample	MS	MSD	Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	MS/MSD RPD	RPD Advisory Limits	Blank	LCS	Sample	MS	MSD
AROCLOR 1016	0.5	ND	2.56	ND	5.56	5.24	NA	102	48	125	NA	106	100	48	125	6.0	NA					
AROCLOR 1221	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1232	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1242	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1248	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1254	1.0	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0-40					
AROCLOR 1260	1.0	ND	2.39	ND	5.16	5.19	NA	95.8	59	122	NA	96.2	96.9	59	122	0.7	NA					
SURROGATES																						
2,4,5,6-TETRACHLORO-M-XYLENE		0.113	0.146	0.185	0.341	0.277	56.5	73.0	13	154	84.1	81.2	66.0	13	154							
DECACHLOROBIPHENYL		0.164	0.171	0.172	0.369	0.378	82.0	85.5	25	140	78.2	87.9	89.5	25	140							

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at .25 ug/kg
SURROGATES spiked at .0200 ug/kg
NA = NOT APPLICABLE
DL = DILUTED OUT
ND = NOT DETECTED
RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE
MS=MATRIX SPIKE
MSD=MATRIX SPIKE DUPLICATE

KEMRON ENVIRONMENTAL SERVICES , OVL
SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP : WG49371
METHOD : 8270
MATRIX : WATER
CONCENTRATION UNITS : UG/L
PREP WORK GRP : WG49216

EXT DATE : 11/11/98
BENCH SHEET : V104P99
BLK FLNM : 6456
LCS FLNM: 6457

RUN DATE : 11/13/98
SMPL ID : L9811209-01 WATER
SMPL FLNM : 6460
MS FLNM : 6461
MSD FLNM : 6462

INSTRUMENT : HPMS7
ANALYST : MLS

	CONCENTRATION , ug/L								PERCENT RECOVERY , %									PERCENT			BEYOND LIMITS				
	RDL	BLANK	LCS SPIKE ADDED	LCS	SAMPLE	MS SPIKE ADDED	MS	MSD	BLANK	LCS	LCS LCL	LCS UCL	SAMPLE	MS	MSD	MS LCL	MS UCL	MSD RPD	RPD UCL	RPD > LIMIT	SAMPLE	BLANK	LCS	MS	MSD
[illegible]	5.0	ND	100	13.4	ND	100	4.1	5.3	NA	13.4	5	150	NA	4.1	5.3	5	150	26	40					L	
[illegible]AMINE	5.0	ND	100	27.5	ND	100	28.6	27.6	NA	27.5	5	150	NA	28.6	27.6	5	150	3	40						
[illegible]	10.0	ND	100	20.3	ND	100	19.6	19.2	NA	20.3	5	150	NA	19.6	19.2	5	150	2	40						
[illegible]	5.0	ND	100	19.4	ND	100	20.0	20.3	NA	19.4	5	112	NA	20.0	20.3	5	112	1	40						
[illegible]ETHER	5.0	ND	100	43.5	ND	100	43.2	46.0	NA	43.5	12	158	NA	43.2	46.0	12	158	6	40						
[illegible]	5.0	ND	100	46.0	ND	100	46.6	48.6	NA	46.0	23	134	NA	46.6	48.6	23	134	4	40						
[illegible]	5.0	ND	100	40.5	ND	100	44.3	45.5	NA	40.5	5	172	NA	44.3	45.5	5	172	3	40						
[illegible]	10.0	ND	100	43.4	ND	100	47.2	48.7	NA	43.4	20	124	NA	47.2	48.7	20	124	3	40						
[illegible]	5.0	ND	100	36.8	ND	100	41.3	40.0	NA	36.8	5	150	NA	41.3	40.0	5	150	3	40						
[illegible]	5.0	ND	100	43.1	ND	100	46.1	48.0	NA	43.1	32	129	NA	46.1	48.0	32	129	4	40						
[illegible]	5.0	ND	100	46.5	ND	100	48.8	50.4	NA	46.5	5	150	NA	48.8	50.4	5	150	3	40						
[illegible]ETHER	5.0	ND	100	42.0	ND	100	42.8	46.3	NA	42.0	36	166	NA	42.8	46.3	36	166	8	40						
[illegible]	5.0	ND	100	43.8	ND	100	46.3	48.9	NA	43.8	5	150	NA	46.3	48.9	5	150	5	40						
[illegible]AMINE	5.0	ND	100	49.7	ND	100	51.2	54.0	NA	49.7	5	230	NA	51.2	54.0	5	230	5	40						
[illegible]	5.0	ND	100	41.9	ND	100	43.5	45.3	NA	41.9	40	113	NA	43.5	45.3	40	113	4	40						
[illegible]	5.0	ND	100	49.9	ND	100	50.6	53.6	NA	49.9	36	180	NA	50.6	53.6	36	180	6	40						
[illegible]	5.0	ND	100	54.7	ND	100	57.0	60.1	NA	54.7	21	196	NA	57.0	60.1	21	196	5	40						
[illegible]	5.0	ND	100	48.6	ND	100	48.9	52.2	NA	48.6	29	182	NA	48.9	52.2	29	182	6	40						
[illegible]	5.0	ND	100	56.3	ND	100	58.6	63.5	NA	56.3	32	119	NA	58.6	63.5	32	119	8	40						
[illegible]THANE	25.0	ND	100	46.9	ND	100	49.4	52.1	NA	46.9	33	184	NA	49.4	52.1	33	184	5	40						
[illegible]	5.0	ND	100	11.1	ND	100	23.6	22.4	NA	11.1	5	150	NA	23.6	22.4	5	150	5	40						
[illegible]	5.0	ND	100	51.7	ND	100	55.5	59.7	NA	51.7	39	135	NA	55.5	59.7	39	135	7	40						
[illegible]	5.0	ND	100	45.0	ND	100	48.4	50.1	NA	45.0	44	142	NA	48.4	50.1	44	142	4	40						
[illegible]	5.0	ND	100	51.6	ND	100	54.4	56.3	NA	51.6	21	133	NA	54.4	56.3	21	133	4	40						
[illegible]	5.0	ND	100	35.5	ND	100	45.8	41.9	NA	35.5	5	150	NA	45.8	41.9	5	150	9	40						
[illegible]	10.0	ND	100	44.7	ND	100	49.4	51.7	NA	44.7	24	116	NA	49.4	51.7	24	116	5	40						
[illegible]OL	5.0	ND	100	69.9	ND	100	70.7	88.7	NA	69.9	22	147	NA	70.7	88.7	22	147	23	40						
[illegible]	5.0	ND	100	62.1	ND	100	56.6	58.8	NA	62.1	5	150	NA	56.6	58.8	6	150	6	40						
[illegible]ADIEN	5.0	ND	100	30.3	ND	100	12.5	13.2	NA	30.3	5	150	NA	12.5	13.2	5	150	6	40						
[illegible]	25.0	ND	100	62.0	ND	100	65.2	82.5	NA	62.0	37	144	NA	65.2	82.5	37	144	23	40						
[illegible]	5.0	ND	100	78.4	ND	100	78.5	97.4	NA	78.4	5	150	NA	78.5	97.4	5	150	21	40						
[illegible]	25.0	ND	100	52.8	ND	100	56.6	62.2	NA	52.8	60	118	NA	56.6	62.2	60	118	9	40			L	L		
[illegible]	5.0	ND	100	58.7	ND	100	56.1	71.7	NA	58.7	5	150	NA	56.1	71.7	5	150	24	40						
[illegible]	5.0	ND	100	73.2	ND	100	67.6	90.3	NA	73.2	5	112	NA	67.6	90.3	5	112	29	40						
[illegible]	5.0	ND	100	60.0	ND	100	62.0	74.3	NA	60.0	33	145	NA	62.0	74.3	33	145	18	40						
[illegible]	5.0	ND	100	74.4	ND	100	67.7	90.2	NA	74.4	60	158	NA	67.7	90.2	60	158	28	40						
[illegible]	25.0	ND	100	56.3	ND	100	68.3	68.7	NA	56.3	5	150	NA	68.3	68.7	5	150	1	40						
[illegible]	5.0	ND	100	58.7	ND	100	60.7	73.7	NA	58.7	47	145	NA	60.7	73.7	47	145	18	40						
[illegible]	25.0	ND	100	86.7	ND	100	79.2	92.7	NA	86.7	5	191	NA	79.2	92.7	5	191	16	40						
[illegible]	25.0	ND	100	40.3	ND	100	38.3	43.8	NA	40.3	5	132	NA	38.3	43.8	5	132	13	40						
[illegible]	5.0	ND	100	65.5	ND	100	66.0	83.1	NA	65.5	5	150	NA	66.0	83.1	5	150	23	40						
[illegible]	5.0	ND	100	97.8	ND	100	84.6	104.9	NA	97.8	39	139	NA	84.6	104.9	39	139	21	40						

NOTES & DEFINITIONS :
NA = NOT APPLICABLE
ND = NOT DETECTED
RDL=REPORTING DETECTION LIMIT

NS = NOT SPIKED
L= below QC limit
H=above QC limit

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49590	Run Date:	11/19/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_9	SMPL Num:	11-071-02	SMPL DF:	10
Matrix:	Water	BLK FLNM:	9BK00354	SMPL FLNM:	9BR00360	MS DF:	10
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	9BR00361	MSD DF:	10
		LCS FLNM:	9QC00355	MSD FLNM:	9BR00362		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
	RDL	BLK	BLK2	LCS	LCS2	LCS Spike Level	SMPL	MS	MSD	MS Spike Level	LCS	LCS2	LCS LCL	LCS UCL	MS	MSD	MS LCL	MS UCL	MS RPD	RPD UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
dichlorodifluoromethane	10.0	ND	ND	18.0	NA	20.0	ND	10.9	14.8	20.0	80.0	NA	38.0	148.0	54.3	74.0	60.0	140.0	30.7	20.0
chloromethane	10.0	ND	ND	17.2	NA	20.0	ND	15.5	16.8	20.0	86.0	NA	56.0	132.0	77.7	84.0	D	273.0	7.9	20.0
vinyl chloride	10.0	ND	ND	20.9	NA	20.0	ND	17.6	20.6	20.0	104.5	NA	68.0	125.0	88.0	103.1	D	251.0	15.8	20.0
bromomethane	10.0	ND	ND	26.4	NA	20.0	ND	22.8	24.0	20.0	132.0	NA	55.0	138.0	114.0	119.8	D	242.0	5.0	20.0
chloroethane	10.0	ND	ND	21.1	NA	20.0	ND	17.7	18.5	20.0	105.5	NA	57.0	128.0	88.7	92.5	14.0	230.0	4.2	20.0
trichlorofluoromethane	10.0	ND	ND	22.0	NA	20.0	ND	16.4	19.0	20.0	110.0	NA	70.0	127.0	81.8	94.9	17.0	181.0	14.8	20.0
freon 113	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	70.0	130.0	NA	20.0
acetone	100.0	ND	ND	19.2	NA	20.0	ND	19.3	19.1	20.0	96.0	NA	44.0	114.0	96.5	95.4	70.0	130.0	1.2	20.0
1,1-dichloroethene	5.0	ND	ND	21.3	NA	20.0	ND	16.7	18.4	20.0	106.5	NA	69.0	144.0	83.3	92.1	D	234.0	10.1	20.0
iodomethane	NTC	ND	ND	18.4	NA	20.0	ND	16.4	19.3	20.0	92.0	NA	NA	NA	82.2	96.4	70.0	130.0	15.9	20.0
methylene chloride	5.0	ND	ND	22.0	NA	20.0	ND	20.3	20.6	20.0	110.0	NA	71.0	128.0	101.5	103.2	D	221.0	1.6	20.0
carbon disulfide	5.0	ND	ND	21.0	NA	20.0	ND	18.1	18.7	20.0	105.0	NA	67.0	136.0	90.6	93.6	70.0	130.0	3.2	20.0
acrylonitrile	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	70.0	130.0	NA	20.0
trans-1,2-dichloroethene	5.0	ND	ND	23.1	NA	20.0	ND	20.1	21.0	20.0	115.5	NA	85.0	133.0	100.5	104.8	54.0	156.0	4.2	20.0
vinyl acetate	10.0	ND	ND	25.5	NA	20.0	ND	24.4	25.7	20.0	127.5	NA	9.0	236.0	122.2	128.3	9.0	236.0	4.9	20.0
1,1-dichloroethane	5.0	ND	ND	22.3	NA	20.0	ND	20.4	20.6	20.0	111.5	NA	82.0	124.0	102.0	102.8	59.0	155.0	0.8	20.0
2-butanone	100.0	ND	ND	20.8	NA	20.0	ND	19.8	20.2	20.0	104.5	NA	43.0	140.0	99.2	100.8	70.0	130.0	1.6	20.0
2,2-dichloropropane	5.0	ND	ND	21.3	NA	20.0	ND	17.9	18.4	20.0	106.5	NA	77.0	126.0	89.4	92.0	60.0	140.0	2.9	20.0
cis-1,2-dichloroethene	5.0	ND	ND	20.8	NA	20.0	ND	19.6	19.4	20.0	104.0	NA	69.0	130.0	97.8	97.0	60.0	140.0	0.8	20.0
chloroform	5.0	ND	ND	22.2	NA	20.0	ND	21.0	21.2	20.0	111.0	NA	83.0	121.0	104.9	105.8	51.0	138.0	0.8	20.0

Notes and Definitions:

RDL = Reporting Detection Limit
BLK = Method Blank
BLK2 = Second Method Blank
LCS = Laboratory Control Sample
LCS2 = Second Laboratory Control Sample
SMPL = Sample Results
MS/MSD = Matrix Spike / Matrix Spike Duplicate
LCL = Lower Control Limit
UCL = Upper Control Limit
RPD = Relative Percent Difference

ND = Not Detected
NA = Not Applicable

KEITON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49590	Run Date:	11/19/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_9	SMPL Num:	11-071-02	SMPL DF:	10
Matrix:	Water	BLK FLNM:	9BK00354	SMPL FLNM:	98R00360	MS DF:	10
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	98R00361	MSD DF:	10
		LCS FLNM:	9QC00355	MSD FLNM:	98R00362		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
	RDL	BLK	BLK2	LCS	LCS2	LCS Spike Level	SMPL	MS	MSD	MS Spike Level	LCS	LCS2	LCS LCL	LCS UCL	MS	MSD	MS LCL	MS UCL	MS RPD	RPD UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
bromochloromethane	5.0	ND	ND	23.4	NA	20.0	ND	22.1	22.4	20.0	117.0	NA	85.0	118.0	110.7	112.2	60.0	140.0	1.3	20.0
1,1,1-trichloroethane	5.0	ND	ND	21.7	NA	20.0	ND	17.8	19.1	20.0	108.5	NA	74.0	125.0	89.2	95.4	52.0	162.0	6.7	20.0
1,1-dichloropropene	5.0	ND	ND	22.4	NA	20.0	ND	18.3	19.7	20.0	112.0	NA	85.0	126.0	91.4	98.5	60.0	140.0	7.5	20.0
carbon tetrachloride	5.0	ND	ND	22.8	NA	20.0	ND	18.2	20.2	20.0	114.0	NA	73.0	129.0	91.0	101.1	70.0	140.0	10.6	20.0
1,2-dichloroethane	5.0	ND	ND	22.3	NA	20.0	ND	21.4	21.1	20.0	111.5	NA	76.0	123.0	106.8	105.7	49.0	155.0	1.0	20.0
benzene	5.0	ND	ND	22.1	NA	20.0	ND	19.9	19.7	20.0	110.5	NA	86.0	118.0	99.4	98.6	37.0	151.0	0.8	20.0
trichloroethene	5.0	ND	ND	21.3	NA	20.0	ND	18.2	18.8	20.0	106.5	NA	82.0	120.0	91.2	94.0	71.0	157.0	3.0	20.0
1,2-dichloropropane	5.0	ND	ND	21.2	NA	20.0	ND	20.0	19.9	20.0	106.0	NA	74.0	126.0	99.9	99.3	D	210.0	0.6	20.0
bromodichloromethane	5.0	ND	ND	23.4	NA	20.0	ND	21.8	22.3	20.0	117.0	NA	74.0	126.0	109.0	111.5	35.0	155.0	2.2	20.0
dibromomethane	5.0	ND	ND	23.3	NA	20.0	ND	21.9	22.1	20.0	116.5	NA	78.0	125.0	109.5	110.4	60.0	140.0	0.8	20.0
2-chloroethylvinyl-ether	10.0	ND	ND	17.1	NA	20.0	ND	8.8	4.5	20.0	85.5	NA	50.0	151.0	44.2	22.5	70.0	130.0	65.3	20.0
4-methyl-2-pentanone	10.0	ND	ND	21.2	NA	20.0	ND	17.9	18.2	20.0	106.0	NA	79.0	127.0	89.3	91.1	70.0	130.0	2.0	20.0
cis-1,3-dichloropropene	5.0	ND	ND	21.6	NA	20.0	ND	21.0	20.9	20.0	108.0	NA	77.0	123.0	104.8	104.4	D	227.0	0.3	20.0
toluene	5.0	ND	ND	21.0	NA	20.0	ND	19.2	19.0	20.0	105.0	NA	83.0	119.0	96.2	95.0	47.0	150.0	1.3	20.0
trans-1,3-dichloropropene	5.0	ND	ND	19.3	NA	20.0	ND	18.2	18.0	20.0	96.5	NA	74.0	124.0	91.0	89.8	17.0	183.0	1.3	20.0
1,1,2-trichloroethane	5.0	ND	ND	21.4	NA	20.0	ND	20.2	19.9	20.0	107.0	NA	72.0	119.0	100.8	99.5	52.0	150.0	1.3	20.0
2-hexanone	10.0	ND	ND	18.7	NA	20.0	ND	17.0	17.8	20.0	93.5	NA	55.0	114.0	84.8	89.2	70.0	130.0	5.1	20.0
1,3-dichloropropane	5.0	ND	ND	20.7	NA	20.0	ND	20.0	19.8	20.0	103.5	NA	73.0	122.0	100.0	98.9	60.0	140.0	1.2	20.0
tetrachloroethene	5.0	ND	ND	20.4	NA	20.0	ND	17.4	18.3	20.0	102.0	NA	82.0	120.0	87.1	91.4	64.0	148.0	4.8	20.0
dibromochloromethane	5.0	ND	ND	19.6	NA	20.0	ND	19.2	18.7	20.0	98.0	NA	72.0	121.0	96.1	93.5	53.0	149.0	2.7	20.0

Notes and Definitions:

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LCS = Laboratory Control Sample
LCS2 = Second Laboratory Control Sample
SMPL = Sample Results
MS/MSD = Matrix Spike / Matrix Spike Duplicate
LCL = Lower Control Limit
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RPD = Relative Percent Difference

ND = Not Detected
NA = Not Applicable

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49590	Run Date:	11/19/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_9	SMPL Num:	11-071-02	SMPL DF:	10
Matrix:	Water	BLK FLNM:	9BK00354	SMPL FLNM:	9BR00360	MS DF:	10
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	9BR00361	MSD DF:	10
		LCS FLNM:	9QC00355	MSD FLNM:	9BR00362		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
1,2-dibromoethane	5.0	ND	ND	21.1	NA	20.0	ND	20.1	20.1	20.0	105.5	NA	75.0	121.0	100.3	100.4	60.0	140.0	0.1	20.0
chlorobenzene	5.0	ND	ND	21.3	NA	20.0	ND	19.9	19.5	20.0	106.5	NA	83.0	120.0	99.4	97.5	37.0	160.0	1.9	20.0
1,1,1,2-tetrachloroethane	5.0	ND	ND	20.9	NA	20.0	ND	20.2	20.1	20.0	104.5	NA	79.0	118.0	101.1	100.3	60.0	140.0	0.8	20.0
ethylbenzene	5.0	ND	ND	20.9	NA	20.0	ND	18.8	18.9	20.0	104.5	NA	82.0	119.0	94.0	94.5	37.0	162.0	0.5	20.0
m + p-xylene	5.0	ND	ND	41.6	NA	40.0	ND	37.7	37.4	40.0	104.0	NA	81.0	121.0	94.1	93.5	60.0	140.0	0.7	20.0
o-xylene	5.0	ND	ND	21.3	NA	20.0	ND	19.3	19.4	20.0	106.5	NA	81.0	199.0	96.7	97.1	60.0	140.0	0.4	20.0
styrene	5.0	ND	ND	21.4	NA	20.0	ND	20.5	20.3	20.0	107.0	NA	81.0	118.0	102.4	101.4	60.0	140.0	0.9	20.0
bromoform	5.0	ND	ND	18.4	NA	20.0	ND	18.3	17.3	20.0	92.0	NA	68.0	129.0	91.4	86.4	45.0	169.0	5.6	20.0
isopropylbenzene	5.0	ND	ND	20.9	NA	20.0	ND	18.3	18.4	20.0	104.5	NA	81.0	121.0	91.4	92.1	60.0	140.0	0.8	20.0
1,1,2,2-tetrachloroethane	5.0	ND	ND	22.0	NA	20.0	ND	20.7	19.7	20.0	110.0	NA	61.0	137.0	103.4	98.4	46.0	157.0	5.0	20.0
1,2,3-trichloropropane	5.0	ND	ND	21.8	NA	20.0	ND	19.9	20.4	20.0	109.0	NA	72.0	130.0	99.7	102.1	60.0	140.0	2.4	20.0
trans-1,4-dichloro-2-butene	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	20.0
propyl-benzene	5.0	ND	ND	19.5	NA	20.0	ND	17.3	17.7	20.0	97.5	NA	69.0	135.0	86.3	88.7	60.0	140.0	2.7	20.0
bromobenzene	5.0	ND	ND	19.6	NA	20.0	ND	19.6	19.1	20.0	98.0	NA	86.0	118.0	98.1	95.3	60.0	140.0	2.9	20.0
1,3,5-trimethylbenzene	5.0	ND	ND	19.4	NA	20.0	ND	17.8	17.6	20.0	97.0	NA	83.0	121.0	89.0	87.9	60.0	140.0	1.2	20.0
2-chlorotoluene	5.0	ND	ND	19.4	NA	20.0	ND	18.4	17.1	20.0	97.0	NA	80.0	126.0	91.9	85.5	60.0	140.0	7.2	20.0
4-chlorotoluene	5.0	ND	ND	19.1	NA	20.0	ND	18.8	19.5	20.0	95.5	NA	80.0	125.0	93.9	97.6	60.0	140.0	3.9	20.0
tert-butyl-benzene	5.0	ND	ND	19.2	NA	20.0	ND	15.4	15.9	20.0	96.0	NA	79.0	114.0	77.2	79.3	60.0	140.0	2.7	20.0
1,2,4-trimethylbenzene	5.0	ND	ND	19.4	NA	20.0	ND	18.4	18.4	20.0	97.0	NA	84.0	121.0	92.0	92.2	60.0	140.0	0.2	20.0
sec-butyl-benzene	5.0	ND	ND	18.8	NA	20.0	ND	16.2	16.7	20.0	94.0	NA	81.0	122.0	80.8	83.4	60.0	140.0	3.1	20.0

Notes and Definitions:

RDL = Reporting Detection Limit
BLK = Method Blank
BLK2 = Second Method Blank
LCS = Laboratory Control Sample
LCS2 = Second Laboratory Control Sample
SMPL = Sample Results
MS/MSD = Matrix Spike / Matrix Spike Duplicate
LCL = Lower Control Limit
UCL = Upper Control Limit
RPD = Relative Per[illegible] Difference

ND = Not Detected
NA = Not Applicable

KEN[illegible]N ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49590	Run Date:	11/19/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_9	SMPL Num:	11-071-02	SMPL DF:	10
Matrix:	Water	BLK FLNM:	9BK00354	SMPL FLNM:	9BR00360	MS DF:	10
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	9BR00361	MSD DF:	10
		LCS FLNM:	9QC00355	MSD FLNM:	9BR00362		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
p-isopropyl-toluene	5.0	ND	ND	18.5	NA	20.0	ND	16.6	17.0	20.0	92.5	NA	80.0	119.0	83.0	84.8	60.0	140.0	2.1	20.0
1,3-dichlorobenzene	5.0	ND	ND	19.3	NA	20.0	ND	18.8	18.5	20.0	96.5	NA	85.0	119.0	94.2	92.6	60.0	140.0	1.7	20.0
1,4-dichlorobenzene	5.0	ND	ND	19.5	NA	20.0	ND	19.5	18.9	20.0	97.5	NA	82.0	122.0	97.3	94.4	18.0	190.0	3.0	20.0
n-butyl-benzene	5.0	ND	ND	19.2	NA	20.0	ND	16.8	17.3	20.0	96.0	NA	80.0	125.0	84.2	86.3	60.0	140.0	2.5	20.0
1,2-dichlorobenzene	5.0	ND	ND	21.1	NA	20.0	ND	19.9	19.4	20.0	105.5	NA	86.0	119.0	99.6	96.9	19.0	190.0	2.7	20.0
1,2-dibromo-3-chloropropane	5.0	ND	ND	17.9	NA	20.0	ND	15.8	16.2	20.0	89.5	NA	66.0	134.0	78.8	80.9	60.0	140.0	2.6	20.0
1,2,4-trichlorobenzene	5.0	ND	ND	18.6	NA	20.0	ND	18.0	17.8	20.0	93.0	NA	78.0	122.0	90.0	89.1	60.0	140.0	1.0	20.0
hexachlorobutadiene	5.0	ND	ND	17.2	NA	20.0	ND	14.6	15.5	20.0	86.0	NA	73.0	125.0	73.0	77.6	60.0	140.0	6.2	20.0
napthalene	10.0	ND	ND	19.3	NA	20.0	ND	18.4	18.1	20.0	96.5	NA	74.0	148.0	91.9	90.5	60.0	140.0	1.5	20.0
1,2,3-trichlorobenzene	5.0	ND	ND	18.5	NA	20.0	ND	17.8	17.1	20.0	92.5	NA	74.0	124.0	88.9	85.7	60.0	140.0	3.7	20.0

BLK2 = Second Method Blank
LCS = Laboratory Control Sample
LCS2 = Second Laboratory Control Sample
SMPL = Sample Results
MS/MSD = Matrix Spike / Matrix Spike Duplicate
LCL = Lower Control Limit
UCL = Upper Control Limit
RPD = Relative Percent Difference

ND = Not Detected
NA = Not Applicable
RDL = Reporting Detection Limit
BLK = Method Blank

ENVIRONMENTAL SERVICES

CHAIN-OF-CUSTODY RECORD

34029

Page 1 of 1

Project Contact: Willy Burton

Turn Around Requirements:

Project No.: 4119-007

Project Name: PACOE Pedrick town

Sampler (print): Klingebiel

Signature: Erin Klingebiel

Per Client Sample I.D. No.	Comp*	Grab	Date	Time	Protocol CWA	Protocol SW846	NUMBER OF SAMPLES	Hold	VOC	SVOC	TSS	Pest/PCB	ADDITIONAL REQUIREMENTS
WEIR 1109 A			11/9/98	930			4		1	1	1	1	
~~WEIR 1108~~ 11098	✓		↓	930			1				1		
WEIR 1107	✓			930			1				1		
WEIR 1106	✓			930			1				1		
MIX 1109		✓	✓	1000			4		1	1	1	1	

11-9-98

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Erin Klingebiel	11/9/98	1500					

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:
			Natalie Booth	11/10/98	1015	C/C Sealed Samples Intact Cooler temp 2°

*Homogenize all composite samples prior to analysis

White – Lab Yellow – Office Pink – Field

Work Order L981172 Client Versar MD # of Samples 5 Due Date 11-24 Page

Sample #	Analyses	Reason	Removed By ADT	Removed From	Moved To	Reliq. By	Ret'd by ADT	Ret'd To	Rec'd By	Reason
1,5	8260	Anal	CMS 11/10/98 @1245	V-1	VOA	Big	NB 11-24-98 @1530	Archive	JKW	Archive
1-5	TSS	Anal	DLN 11/10/98 @1250	Walkin	Wet	Big	DLN 11/10/98 @1315	Archive	Big	Archive
1,5	GNA	Ext	CB 11/11/98 @1615	WALKIN	ELAB	Big	PH 11-12-98 @0800	Dumpster	NB	Disposal
1,5	PCB	EXT	PH 11/12/98 @1000	WALK-IN	ELAB	Big	PH 11-13-98 @0800	Dumpster	NB	Disposal

KEMRON Environmental Services
109 Station Park
Marietta, Ohio 45750
Phone: (740) 373-4071

Versar, Inc.
9200 Rumsey Road
Columbia, MD 21045-1934

Attention: William Burton

PO Number:
Account Number: VERSAR-MD-331

Login #: L9811250
Report Date: 11/25/98
Work ID: PEDRICK TOWN DISPOSAL
Date Received: 11/13/98

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9811250-01	WEIR 1112/COMP	L9811250-02	WEIR 1112/GRAB
L9811250-03	WEIR 1111/COMP	L9811250-04	WEIR 1110/COMP
L9811250-05	MIX 1112/GRAB	L9811250-06	BG 1112/GRAB

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

Certified By
Dennis S. Tepe

KEMRON
ENVIRONMENTAL SERVICES

Login #L9811250
November 25, 1998 02:07 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9811250-01
Client Sample ID: WEIR 1112/COMP
Site/Work ID: PEDRICK TOWN DISPOSAL

Matrix: Water
Collected: 11/12/98 1200

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	19		5.0	1	N/A	DLP	11/16/98	13:30	160.2

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811250-01
Client Sample ID: WEIR 1112/COMP
Site/Work ID: PEDRICK TOWN DISPOSAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/12/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/17/98
Analysis Date: 11/18/98 Time: 11:41

Instrument: HP10
Analyst: CDB
Lab File ID: 054R0101

Method: 8082/3550
Run ID: R56467
Batch : WG49492

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016.....	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221.....	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232.....	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242.....	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248.....	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254.....	ug/L		ND	1.0	1
11096-82-5	Aroclor-1260.....	ug/L		ND	1.0	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene.....	52.5	(13 - 154%)
Decachlorobiphenyl.....	56.5	(25 - 140%)

RL = Reporting Limit

KEMRON ENVI[illegible]NMENTAL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811250-01
Client Sample ID: WEIR 1112/COMP
Site/Work ID: PEDRICK TOWN DISPOSAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/12/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/17/98
Analysis Date: 11/18/98 Time:

Instrument: HP9
Analyst: ECL
Lab File ID: 1436

Method: 8081A\3510C
Run ID: R56548
Batch : WG49491

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L		ND	0.05	1
319-85-7	beta-BHC	ug/L		ND	0.05	1
319-86-8	delta-BHC	ug/L		ND	0.05	1
58-89-9	gamma-BHC (Lindane)	ug/L		ND	0.05	1
76-44-8	Heptachlor	ug/L		ND	0.05	1
309-00-2	Aldrin	ug/L		ND	0.05	1
1024-57-3	Heptachlor epoxide	ug/L		ND	0.05	1
959-98-8	Endosulfan I	ug/L		ND	0.05	1
60-57-1	Dieldrin	ug/L		ND	0.10	1
72-55-9	4,4'-DDE	ug/L		ND	0.10	1
72-20-8	Endrin	ug/L		ND	0.10	1
33213-65-9	Endosulfan II	ug/L		ND	0.10	1
72-54-8	4,4'-DDD	ug/L		ND	0.10	1
1031-07-8	Endosulfan sulfate	ug/L		ND	0.10	1
50-29-3	4,4'-DDT	ug/L		ND	0.10	1
72-43-5	Methoxychlor	ug/L		ND	0.50	1
53494-70-5	Endrin ketone	ug/L		ND	0.10	1
7421-93-4	Endrin aldehyde	ug/L		ND	0.10	1
5103-71-9	alpha Chlordane	ug/L		ND	0.05	1
5103-74-2	gamma Chlordane	ug/L		ND	0.05	1
8001-35-2	Toxaphene	ug/L		ND	1.0	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	43.8	(13 - 154%)
Decachlorobiphenyl	48.2	(25 - 140%)

RL = Reporting Limit

Login #L9811250
November 25, 1998 02:07 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811250-02
Client Sample ID: WEIR 1112/GRAB
Site/Work ID: PEDRICK TOWN DISPOSAL
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/13/98
Analysis Date: 11/18/98 Time: 18:58

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/12/98

Instrument: HPMS5
Analyst: MDC
Lab File ID: 8706

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8270C\3510C
Run ID: R56742
Batch : WG49409

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L		ND	11	2.27
111-44-4	Bis(2-Chloroethyl)ether	ug/L		ND	11	2.27
95-57-8	2-Chlorophenol	ug/L		ND	11	2.27
541-73-1	1,3-Dichlorobenzene	ug/L		ND	11	2.27
106-46-7	1,4-Dichlorobenzene	ug/L		ND	11	2.27
95-50-1	1,2-Dichlorobenzene	ug/L		ND	11	2.27
95-48-7	2-Methylphenol	ug/L		ND	11	2.27
108-60-1	bis(2-Chloroisopropyl)ether	ug/L		ND	11	2.27
106-44-5	4-Methylphenol	ug/L		ND	11	2.27
621-64-7	N-Nitroso-di-n-propylamine	ug/L		ND	11	2.27
67-72-1	Hexachloroethane	ug/L		ND	11	2.27
98-95-3	Nitrobenzene	ug/L		ND	11	2.27
78-59-1	Isophorone	ug/L		ND	11	2.27
88-75-5	2-Nitrophenol	ug/L		ND	11	2.27
105-67-9	2,4-Dimethylphenol	ug/L		ND	11	2.27
111-91-1	Bis(2-Chloroethoxy)Methane	ug/L		ND	11	2.27
120-83-2	2,4-Dichlorophenol	ug/L		ND	11	2.27
120-82-1	1,2,4-Trichlorobenzene	ug/L		ND	11	2.27
91-20-3	Naphthalene	ug/L		ND	11	2.27
106-47-8	4-Chloroaniline	ug/L		ND	11	2.27
87-68-3	Hexachlorobutadiene	ug/L		ND	11	2.27
59-50-7	4-Chloro-3-methylphenol	ug/L		ND	11	2.27
91-57-6	2-Methylnaphthalene	ug/L		ND	11	2.27
77-47-4	Hexachlorocyclopentadiene	ug/L		ND	11	2.27
88-06-2	2,4,6-Trichlorophenol	ug/L		ND	11	2.27
95-95-4	2,4,5-Trichlorophenol	ug/L		ND	57	2.27
91-58-7	2-Chloronaphthalene	ug/L		ND	11	2.27
88-74-4	2-Nitroaniline	ug/L		ND	57	2.27
131-11-3	Dimethylphthalate	ug/L		ND	11	2.27
208-96-8	Acenaphthylene	ug/L		ND	11	2.27
606-20-2	2,6-Dinitrotoluene	ug/L		ND	11	2.27
99-09-2	3-Nitroaniline	ug/L		ND	57	2.27
83-32-9	Acenaphthene	ug/L		ND	11	2.27
51-28-5	2,4-Dinitrophenol	ug/L		ND	57	2.27
100-02-7	4-Nitrophenol	ug/L		ND	57	2.27
132-64-9	Dibenzofuran	ug/L		ND	11	2.27
121-14-2	2,4-Dinitrotoluene	ug/L		ND	11	2.27
84-66-2	Diethylphthalate	ug/L		ND	11	2.27
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L		ND	11	2.27

RL = Reporting Limit

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811250-02
Client Sample ID: WEIR 1112/GRAB
Site/Work ID: PEDRICK TOWN DISPOSAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/12/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/13/98
Analysis Date: 11/18/98 Time: 18:58

Instrument: HPMS5
Analyst: MDC
Lab File ID: 8706

Method: 8270C\3510C
Run ID: R56742
Batch : WG49409

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L		ND	11	2.27
100-01-6	4-Nitroaniline	ug/L		ND	57	2.27
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	57	2.27
86-30-6	N-Nitrosodiphenylamine	ug/L		ND	11	2.27
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	11	2.27
118-74-1	Hexachlorobenzene	ug/L		ND	11	2.27
87-86-5	Pentachlorophenol	ug/L		ND	57	2.27
85-01-8	Phenanthrene	ug/L		ND	11	2.27
120-12-7	Anthracene	ug/L		ND	11	2.27
86-74-8	Carbazole	ug/L		ND	11	2.27
84-74-2	Di-N-Butylphthalate	ug/L		ND	11	2.27
206-44-0	Fluoranthene	ug/L		ND	11	2.27
129-00-0	Pyrene	ug/L		ND	11	2.27
85-68-7	Butylbenzylphthalate	ug/L		ND	11	2.27
91-94-1	3,3'-Dichlorobenzidine	ug/L		ND	23	2.27
56-55-3	Benzo(a)anthracene	ug/L		ND	11	2.27
218-01-9	Chrysene	ug/L		ND	11	2.27
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	11	2.27
117-84-0	Di-n-octylphthalate	ug/L		ND	11	2.27
205-99-2	Benzo(b)fluoranthene	ug/L		ND	11	2.27
207-08-9	Benzo(k)fluoranthene	ug/L		ND	11	2.27
50-32-8	Benzo(a)pyrene	ug/L		ND	11	2.27
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L		ND	11	2.27
53-70-3	Dibenzo(a,h)Anthracene	ug/L		ND	11	2.27
191-24-2	Benzo(g,h,i)Perylene	ug/L		ND	11	2.27

SURROGATES- In Percent Recovery:

2-Fluorophenol	39.8	(21 - 100%)
Phenol-d5	23.9	(10 - 94%)
Nitrobenzene-d5	53.7	(35 - 114%)
2-Fluorobiphenyl	60.1	(43 - 116%)
2,4,6-Tribromophenol	99.0	(10 - 123%)
p-Terphenyl-d14	116	(33 - 141%)

RL = Reporting Limit

Login #L9811250
November 25, 1998 02:07 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811250-02
Client Sample ID: WEIR 1112/GRAB
Site/Work ID: PEDRICK TOWN DISPOSAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/12/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/18/98 Time: 14:52

Instrument: HPMS2
Analyst: CMS
Lab File ID: 2VR27625

Method: 8260B
Run ID: R56480
Batch : WG49540

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/L		ND	10	1
74-83-9	Bromomethane	ug/L		ND	10	1
75-01-4	Vinyl chloride	ug/L		ND	10	1
75-00-3	Chloroethane	ug/L		ND	10	1
75-09-2	Methylene chloride	ug/L		ND	5.0	1
67-64-1	Acetone	ug/L		ND	10	1
75-15-0	Carbon disulfide	ug/L		ND	5.0	1
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1
75-34-3	1,1-Dichloroethane	ug/L		ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L		ND	5.0	1
67-66-3	Chloroform	ug/L		ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	1
78-93-3	2-Butanone	ug/L		ND	10	1
71-55-6	1,1,1-Trichloroethane	ug/L		ND	5.0	1
56-23-5	Carbon tetrachloride	ug/L		ND	5.0	1
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	1
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	1
79-01-6	Trichloroethene	ug/L		ND	5.0	1
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1
71-43-2	Benzene	ug/L		ND	5.0	1
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	1
75-25-2	Bromoform	ug/L		ND	5.0	1
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	1
591-78-6	2-Hexanone	ug/L		ND	10	1
127-18-4	Tetrachloroethene	ug/L		ND	5.0	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0	1
108-88-3	Toluene	ug/L		ND	5.0	1
108-90-7	Chlorobenzene	ug/L		ND	5.0	1
100-41-4	Ethyl benzene	ug/L		ND	5.0	1
100-42-5	Styrene	ug/L		ND	5.0	1
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1

SURROGATES- In Percent Recovery:

Dibromofluoromethane	98.2	(86 - 118%)
Toluene-d8	102	(88 - 110%)
p-Bromofluorobenzene	103	(86 - 115%)
1,2-dichloroethane-d4	97.7	(80 - 120%)

RL = Reporting Limit

Lab Sample ID: L9811250-03
Client Sample ID: WEIR 1111/COMP
Site/Work ID: PEDRICK TOWN DISPOSAL

Matrix: Water
Collected: 11/11/98 1200

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	19		5.0	1	N/A	DLP	11/16/98	13:30	160.2

Lab Sample ID: L9811250-04
Client Sample ID: WEIR 1110/COMP
Site/Work ID: PEDRICK TOWN DISPOSAL

Matrix: Water
Collected: 11/10/98 1200

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	22		5.0	1	N/A	DLP	11/16/98	13:30	160.2

Lab Sample ID: L9811250-05
Client Sample ID: MIX 1112/GRAB
Site/Work ID: PEDRICK TOWN DISPOSAL

Matrix: Water
Collected: 11/12/98 1230

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	63		5.0	1	N/A	DLP	11/16/98	13:30	160.2

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811250-05
Client Sample ID: MIX 1112/GRAB
Site/Work ID: PEDRICK TOWN DISPOSAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/12/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/17/98
Analysis Date: 11/18/98 Time: 12:20

Instrument: HP10
Analyst: CDB
Lab File ID: 055R0101

Method: 8082/3550
Run ID: R56467
Batch : WG49492

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.55	1.1
11104-28-2	Aroclor-1221	ug/L		ND	0.55	1.1
11141-16-5	Aroclor-1232	ug/L		ND	0.55	1.1
53469-21-9	Aroclor-1242	ug/L		ND	0.55	1.1
12672-29-6	Aroclor-1248	ug/L		ND	0.55	1.1
11097-69-1	Aroclor-1254	ug/L		ND	1.1	1.1
11096-82-5	Aroclor-1260	ug/L		ND	1.1	1.1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	37.4	(13 - 154%)
Decachlorobiphenyl	37.7	(25 - 140%)

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811250-05
Client Sample ID: MIX 1112/GRAB
Site/Work ID: PEDRICK TOWN DISPOSAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/12/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/17/98
Analysis Date: 11/18/98 Time:

Instrument: HP9
Analyst: ECL
Lab File ID: 1437

Method: 8081A\3510C
Run ID: R56548
Batch : WG49491

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L		ND	0.055	1.1
319-85-7	beta-BHC	ug/L		ND	0.055	1.1
319-86-8	delta-BHC	ug/L		ND	0.055	1.1
58-89-9	gamma-BHC (Lindane)	ug/L		ND	0.055	1.1
76-44-8	Heptachlor	ug/L		ND	0.055	1.1
309-00-2	Aldrin	ug/L		ND	0.055	1.1
1024-57-3	Heptachlor epoxide	ug/L		ND	0.055	1.1

RL = Reporting Limit

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811250-05
Client Sample ID: MIX 1112/GRAB
Site/Work ID: PEDRICK TOWN DISPOSAL
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/17/98
Analysis Date: 11/18/98 Time:

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/12/98

Instrument: HP9
Analyst: ECL
Lab File ID: 1437

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8081A\3510C
Run ID: R56548
Batch : WG49491

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
959-98-8	Endosulfan I	ug/L		ND	0.055	1.1
60-57-1	Dieldrin	ug/L		ND	0.11	1.1
72-55-9	4,4'-DDE	ug/L		ND	0.11	1.1
72-20-8	Endrin	ug/L		ND	0.11	1.1
33213-65-9	Endosulfan II	ug/L		ND	0.11	1.1
72-54-8	4,4'-DDD	ug/L		ND	0.11	1.1
1031-07-8	Endosulfan sulfate	ug/L		ND	0.11	1.1
50-29-3	4,4'-DDT	ug/L		ND	0.11	1.1
72-43-5	Methoxychlor	ug/L		ND	0.55	1.1
53494-70-5	Endrin ketone	ug/L		ND	0.11	1.1
7421-93-4	Endrin aldehyde	ug/L		ND	0.11	1.1
5103-71-9	alpha Chlordane	ug/L		ND	0.055	1.1
5103-74-2	gamma Chlordane	ug/L		ND	0.055	1.1
8001-35-2	Toxaphene	ug/L		ND	1.1	1.1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	35.6	(13 - 154%)
Decachlorobiphenyl	36.5	(25 - 140%)

RL = Reporting Limit

Login #L9811250
November 25, 1998 02:07 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811250-05
Client Sample ID: MIX 1112/GRAB
Site/Work ID: PEDRICK TOWN DISPOSAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/12/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/13/98
Analysis Date: 11/18/98 Time: 19:38

Instrument: HPMS5
Analyst: MDC
Lab File ID: 8707

Method: 8270C\3510C
Run ID: R56742
Batch : WG49409

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L		ND	10	2
111-44-4	Bis(2-Chloroethyl)ether	ug/L		ND	10	2
95-57-8	2-Chlorophenol	ug/L		ND	10	2
541-73-1	1,3-Dichlorobenzene	ug/L		ND	10	2
106-46-7	1,4-Dichlorobenzene	ug/L		ND	10	2
95-50-1	1,2-Dichlorobenzene	ug/L		ND	10	2
95-48-7	2-Methylphenol	ug/L		ND	10	2
108-60-1	bis(2-Chloroisopropyl)ether	ug/L		ND	10	2
106-44-5	4-Methylphenol	ug/L		ND	10	2
621-64-7	N-Nitroso-di-n-propylamine	ug/L		ND	10	2
67-72-1	Hexachloroethane	ug/L		ND	10	2
98-95-3	Nitrobenzene	ug/L		ND	10	2
78-59-1	Isophorone	ug/L		ND	10	2
88-75-5	2-Nitrophenol	ug/L		ND	10	2
105-67-9	2,4-Dimethylphenol	ug/L		ND	10	2
111-91-1	Bis(2-Chloroethoxy)Methane	ug/L		ND	10	2
120-83-2	2,4-Dichlorophenol	ug/L		ND	10	2
120-82-1	1,2,4-Trichlorobenzene	ug/L		ND	10	2
91-20-3	Naphthalene	ug/L		ND	10	2
106-47-8	4-Chloroaniline	ug/L		ND	10	2
87-68-3	Hexachlorobutadiene	ug/L		ND	10	2
59-50-7	4-Chloro-3-methylphenol	ug/L		ND	10	2
91-57-6	2-Methylnaphthalene	ug/L		ND	10	2
77-47-4	Hexachlorocyclopentadiene	ug/L		ND	10	2
88-06-2	2,4,6-Trichlorophenol	ug/L		ND	10	2
95-95-4	2,4,5-Trichlorophenol	ug/L		ND	50	2
91-58-7	2-Chloronaphthalene	ug/L		ND	10	2
88-74-4	2-Nitroaniline	ug/L		ND	50	2
131-11-3	Dimethylphthalate	ug/L		ND	10	2
208-96-8	Acenaphthylene	ug/L		ND	10	2
606-20-2	2,6-Dinitrotoluene	ug/L		ND	10	2
99-09-2	3-Nitroaniline	ug/L		ND	50	2
83-32-9	Acenaphthene	ug/L		ND	10	2
51-28-5	2,4-Dinitrophenol	ug/L		ND	50	2
100-02-7	4-Nitrophenol	ug/L		ND	50	2
132-64-9	Dibenzofuran	ug/L		ND	10	2
121-14-2	2,4-Dinitrotoluene	ug/L		ND	10	2
84-66-2	Diethylphthalate	ug/L		ND	10	2
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L		ND	10	2

RL = Reporting Limit

KEMRON ENVI[illegible]NMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811250-05
Client Sample ID: MIX 1112/GRAB
Site/Work ID: PEDRICK TOWN DISPOSAL
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/13/98
Analysis Date: 11/18/98 Time: 19:38

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/12/98

Instrument: HPMS5
Analyst: MDC
Lab File ID: 8707

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8270C\3510C
Run ID: R56742
Batch : WG49409

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L		ND	10	2
100-01-6	4-Nitroaniline	ug/L		ND	50	2
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	50	2
86-30-6	N-Nitrosodiphenylamine	ug/L		ND	10	2
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	10	2
118-74-1	Hexachlorobenzene	ug/L		ND	10	2
87-86-5	Pentachlorophenol	ug/L		ND	50	2
85-01-8	Phenanthrene	ug/L		ND	10	2
120-12-7	Anthracene	ug/L		ND	10	2
86-74-8	Carbazole	ug/L		ND	10	2
84-74-2	Di-N-Butylphthalate	ug/L		ND	10	2
206-44-0	Fluoranthene	ug/L		ND	10	2
129-00-0	Pyrene	ug/L		ND	10	2
85-68-7	Butylbenzylphthalate	ug/L		ND	10	2
91-94-1	3,3'-Dichlorobenzidine	ug/L		ND	20	2
56-55-3	Benzo(a)anthracene	ug/L		ND	10	2
218-01-9	Chrysene	ug/L		ND	10	2
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	10	2
117-84-0	Di-n-octylphthalate	ug/L		ND	10	2
205-99-2	Benzo(b)fluoranthene	ug/L		ND	10	2
207-08-9	Benzo(k)fluoranthene	ug/L		ND	10	2
50-32-8	Benzo(a)pyrene	ug/L		ND	10	2
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L		ND	10	2
53-70-3	Dibenzo(a,h)Anthracene	ug/L		ND	10	2
191-24-2	Benzo(g,h,i)Perylene	ug/L		ND	10	2

SURROGATES- In Percent Recovery:

2-Fluorophenol	39.3	(21 - 100%)
Phenol-d5	22.7	(10 - 94%)
Nitrobenzene-d5	55.7	(35 - 114%)
2-Fluorobiphenyl	61.1	(43 - 116%)
2,4,6-Tribromophenol	98.3	(10 - 123%)
p-Terphenyl-d14	112	(33 - 141%)

RL = Reporting Limit

Login #L9811250
November 25, 1998 02:07 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811250-05
Client Sample ID: MIX 1112/GRAB
Site/Work ID: PEDRICK TOWN DISPOSAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/12/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/18/98 Time: 15:30

Instrument: HPMS2
Analyst: CMS
Lab File ID: 2VR27626

Method: 8260B
Run ID: R56480
Batch : WG49540

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/L		ND	10	1
74-83-9	Bromomethane	ug/L		ND	10	1
75-01-4	Vinyl chloride	ug/L		ND	10	1
75-00-3	Chloroethane	ug/L		ND	10	1
75-09-2	Methylene chloride	ug/L		ND	5.0	1
67-64-1	Acetone	ug/L	18		10	1
75-15-0	Carbon disulfide	ug/L		ND	5.0	1
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1
75-34-3	1,1-Dichloroethane	ug/L		ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L		ND	5.0	1
67-66-3	Chloroform	ug/L		ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	1
78-93-3	2-Butanone	ug/L		ND	10	1
71-55-6	1,1,1-Trichloroethane	ug/L		ND	5.0	1
56-23-5	Carbon tetrachloride	ug/L		ND	5.0	1
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	1
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	1
79-01-6	Trichloroethene	ug/L		ND	5.0	1
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1
71-43-2	Benzene	ug/L		ND	5.0	1
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	1
75-25-2	Bromoform	ug/L		ND	5.0	1
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	1
591-78-6	2-Hexanone	ug/L		ND	10	1
127-18-4	Tetrachloroethene	ug/L		ND	5.0	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0	1
108-88-3	Toluene	ug/L		ND	5.0	1
108-90-7	Chlorobenzene	ug/L		ND	5.0	1
100-41-4	Ethyl benzene	ug/L		ND	5.0	1
100-42-5	Styrene	ug/L		ND	5.0	1
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1

SURROGATES- In Percent Recovery:

Dibromofluoromethane	96.4	(86 - 118%)
Toluene-d8	97.5	(88 - 110%)
p-Bromofluorobenzene	99.9	(86 - 115%)
1,2-dichloroethane-d4	100	(80 - 120%)

RL = Reporting Limit

Login #L[illegible]1250
November 25, 1998 02:07 pm

KEMRON ENVI[illegible]NMENTAL SERVICES

Lab Sample ID: L9811250-06
Client Sample ID: BG 1112/GRAB
Site/Work ID: PEDRICK TOWN DISPOSAL

Matrix: Water
Collected: 11/12/98 1330

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	350		10	2	N/A	DLP	11/16/98	13:30	160.2

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811250-06
Client Sample ID: BG 1112/GRAB
Site/Work ID: PEDRICK TOWN DISPOSAL
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/17/98
Analysis Date: 11/18/98 Time:

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/12/98

Instrument: HP10
Analyst: CDB
Lab File ID: 056R0101

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8082/3550
Run ID: R56467
Batch : WG49492

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016.....	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221.....	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232.....	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242.....	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248.....	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254.....	ug/L		ND	1.0	1
11096-82-5	Aroclor-1260.....	ug/L		ND	1.0	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene.....	49.3		(13 - 154%)
Decachlorobiphenyl.....		NF,SMI	(25 - 140%)

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811250-06
Client Sample ID: BG 1112/GRAB
Site/Work ID: PEDRICK TOWN DISPOSAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/12/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/17/98
Analysis Date: 11/18/98 Time:

Instrument: HP9
Analyst: ECL
Lab File ID: 1438

Method: 8081A\3510C
Run ID: R56548
Batch : WG49491

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L		ND	0.05	1
319-85-7	beta-BHC	ug/L		ND	0.05	1
319-86-8	delta-BHC	ug/L		ND	0.05	1
58-89-9	gamma-BHC (Lindane)	ug/L		ND	0.05	1
76-44-8	Heptachlor	ug/L		ND	0.05	1
309-00-2	Aldrin	ug/L		ND	0.05	1
1024-57-3	Heptachlor epoxide	ug/L		ND	0.05	1
959-98-8	Endosulfan I	ug/L		ND	0.05	1
60-57-1	Dieldrin	ug/L		ND	0.10	1
72-55-9	4,4'-DDE	ug/L		ND	0.10	1
72-20-8	Endrin	ug/L		ND	0.10	1
33213-65-9	Endosulfan II	ug/L		ND	0.10	1
72-54-8	4,4'-DDD	ug/L		ND	0.10	1
1031-07-8	Endosulfan sulfate	ug/L		ND	0.10	1
50-29-3	4,4'-DDT	ug/L		ND	0.10	1
72-43-5	Methoxychlor	ug/L		ND	0.50	1
53494-70-5	Endrin ketone	ug/L		ND	0.10	1
7421-93-4	Endrin aldehyde	ug/L		ND	0.10	1
5103-71-9	alpha Chlordane	ug/L		ND	0.05	1
5103-74-2	gamma Chlordane	ug/L		ND	0.05	1
8001-35-2	Toxaphene	ug/L		ND	1.0	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	43.2	(13 - 154%)
Decachlorobiphenyl	45.0	(25 - 140%)

RL = Reporting Limit

KEMRON ENVI[illegible]MENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811250-06
Client Sample ID: BG 1112/GRAB
Site/Work ID: PEDRICK TOWN DISPOSAL
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/13/98
Analysis Date: 11/18/98 Time: 20:19

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/12/98

Instrument: HPMS5
Analyst: MDC
Lab File ID: 8708

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8270C\3510C
Run ID: R56742
Batch : WG49409

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L		ND	10	2
111-44-4	Bis(2-Chloroethyl)ether	ug/L		ND	10	2
95-57-8	2-Chlorophenol	ug/L		ND	10	2
541-73-1	1,3-Dichlorobenzene	ug/L		ND	10	2
106-46-7	1,4-Dichlorobenzene	ug/L		ND	10	2
95-50-1	1,2-Dichlorobenzene	ug/L		ND	10	2
95-48-7	2-Methylphenol	ug/L		ND	10	2
108-60-1	bis(2-Chloroisopropyl)ether	ug/L		ND	10	2
106-44-5	4-Methylphenol	ug/L		ND	10	2
621-64-7	N-Nitroso-di-n-propylamine	ug/L		ND	10	2
67-72-1	Hexachloroethane	ug/L		ND	10	2
98-95-3	Nitrobenzene	ug/L		ND	10	2
78-59-1	Isophorone	ug/L		ND	10	2
88-75-5	2-Nitrophenol	ug/L		ND	10	2
105-67-9	2,4-Dimethylphenol	ug/L		ND	10	2
111-91-1	Bis(2-Chloroethoxy)Methane	ug/L		ND	10	2
120-83-2	2,4-Dichlorophenol	ug/L		ND	10	2
120-82-1	1,2,4-Trichlorobenzene	ug/L		ND	10	2
91-20-3	Naphthalene	ug/L		ND	10	2
106-47-8	4-Chloroaniline	ug/L		ND	10	2
87-68-3	Hexachlorobutadiene	ug/L		ND	10	2
59-50-7	4-Chloro-3-methylphenol	ug/L		ND	10	2
91-57-6	2-Methylnaphthalene	ug/L		ND	10	2
77-47-4	Hexachlorocyclopentadiene	ug/L		ND	10	2
88-06-2	2,4,6-Trichlorophenol	ug/L		ND	10	2
95-95-4	2,4,5-Trichlorophenol	ug/L		ND	50	2
91-58-7	2-Chloronaphthalene	ug/L		ND	10	2
88-74-4	2-Nitroaniline	ug/L		ND	50	2
131-11-3	Dimethylphthalate	ug/L		ND	10	2
208-96-8	Acenaphthylene	ug/L		ND	10	2
606-20-2	2,6-Dinitrotoluene	ug/L		ND	10	2
99-09-2	3-Nitroaniline	ug/L		ND	50	2
83-32-9	Acenaphthene	ug/L		ND	10	2
51-28-5	2,4-Dinitrophenol	ug/L		ND	50	2
100-02-7	4-Nitrophenol	ug/L		ND	50	2
132-64-9	Dibenzofuran	ug/L		ND	10	2
121-14-2	2,4-Dinitrotoluene	ug/L		ND	10	2
84-66-2	Diethylphthalate	ug/L		ND	10	2
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L		ND	10	2

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811250-06
Client Sample ID: BG 1112/GRAB
Site/Work ID: PEDRICK TOWN DISPOSAL
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/12/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/13/98
Analysis Date: 11/18/98 Time: 20:19

Instrument: HPMS5
Analyst: MDC
Lab File ID: 8708

Method: 8270C\3510C
Run ID: R56742
Batch : WG49409

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L		ND	10	2
100-01-6	4-Nitroaniline	ug/L		ND	50	2
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	50	2
86-30-6	N-Nitrosodiphenylamine	ug/L		ND	10	2
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	10	2
118-74-1	Hexachlorobenzene	ug/L		ND	10	2
87-86-5	Pentachlorophenol	ug/L		ND	50	2
85-01-8	Phenanthrene	ug/L		ND	10	2
120-12-7	Anthracene	ug/L		ND	10	2
86-74-8	Carbazole	ug/L		ND	10	2
84-74-2	Di-N-Butylphthalate	ug/L		ND	10	2
206-44-0	Fluoranthene	ug/L		ND	10	2
129-00-0	Pyrene	ug/L		ND	10	2
85-68-7	Butylbenzylphthalate	ug/L		ND	10	2
91-94-1	3,3'-Dichlorobenzidine	ug/L		ND	20	2
56-55-3	Benzo(a)anthracene	ug/L		ND	10	2
218-01-9	Chrysene	ug/L		ND	10	2
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	10	2
117-84-0	Di-n-octylphthalate	ug/L		ND	10	2
205-99-2	Benzo(b)fluoranthene	ug/L		ND	10	2
207-08-9	Benzo(k)fluoranthene	ug/L		ND	10	2
50-32-8	Benzo(a)pyrene	ug/L		ND	10	2
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L		ND	10	2
53-70-3	Dibenzo(a,h)Anthracene	ug/L		ND	10	2
191-24-2	Benzo(g,h,i)Perylene	ug/L		ND	10	2

SURROGATES- In Percent Recovery:

2-Fluorophenol	40.3	(21 - 100%)
Phenol-d5	23.1	(10 - 94%)
Nitrobenzene-d5	57.3	(35 - 114%)
2-Fluorobiphenyl	61.7	(43 - 116%)
2,4,6-Tribromophenol	88.3	(10 - 123%)
p-Terphenyl-d14	97.5	(33 - 141%)

RL = Reporting Limit

Login #[illegible]1250
November 25, 1998 02:07 pm

KEMRON ENV[illegible]NMENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811250-06
Client Sample ID: BG 1112/GRAB
Site/Work ID: PEDRICK TOWN DISPOSAL
Matrix: Water

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/18/98 Time: 16:08

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/12/98

Instrument: HPMS2
Analyst: CMS
Lab File ID: 2VR27627

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8260B
Run ID: R56480
Batch : WG49540

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/L		ND	10	1
74-83-9	Bromomethane	ug/L		ND	10	1
75-01-4	Vinyl chloride	ug/L		ND	10	1
75-00-3	Chloroethane	ug/L		ND	10	1
75-09-2	Methylene chloride	ug/L		ND	5.0	1
67-64-1	Acetone	ug/L	19	ND	10	1
75-15-0	Carbon disulfide	ug/L		ND	5.0	1
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1
75-34-3	1,1-Dichloroethane	ug/L		ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L		ND	5.0	1
67-66-3	Chloroform	ug/L		ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	1
78-93-3	2-Butanone	ug/L		ND	10	1
71-55-6	1,1,1-Trichloroethane	ug/L		ND	5.0	1
56-23-5	Carbon tetrachloride	ug/L		ND	5.0	1
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	1
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	1
79-01-6	Trichloroethene	ug/L		ND	5.0	1
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1
71-43-2	Benzene	ug/L		ND	5.0	1
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	1
75-25-2	Bromoform	ug/L		ND	5.0	1
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	1
591-78-6	2-Hexanone	ug/L		ND	10	1
127-18-4	Tetrachloroethene	ug/L		ND	5.0	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0	1
108-88-3	Toluene	ug/L		ND	5.0	1
108-90-7	Chlorobenzene	ug/L		ND	5.0	1
100-41-4	Ethyl benzene	ug/L		ND	5.0	1
100-42-5	Styrene	ug/L		ND	5.0	1
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1

SURROGATES- In Percent Recovery:

Dibromofluoromethane	101	(86 - 118%)
Toluene-d8	101	(88 - 110%)
p-Bromofluorobenzene	104	(86 - 115%)
1,2-dichloroethane-d4	107	(80 - 120%)

RL = Reporting Limit

Order #: 98-11-250
November 25, 1998 12:57 pm

KEMRON ENVIRONMENTAL SERVICES
WORK GROUPS

Work Group	Run ID	Sample	Dil Type	Matrix	Product	Method	Date Collected	Department
WG49312	R56742	L9811250-02		Water	TCL Semivolatiles	8270C\3510C	12-NOV-1998	Extraction
WG49312	R56742	L9811250-05		Water	TCL Semivolatiles	8270C\3510C	12-NOV-1998	Extraction
WG49312	R56742	L9811250-06		Water	TCL Semivolatiles	8270C\3510C	12-NOV-1998	Extraction
WG49404	R56548	L9811250-01		Water	Organochlorine Pesticides	8081A\3510C	12-NOV-1998	Extraction
WG49404	R56548	L9811250-05		Water	Organochlorine Pesticides	8081A\3510C	12-NOV-1998	Extraction
WG49404	R56548	L9811250-06		Water	Organochlorine Pesticides	8081A\3510C	12-NOV-1998	Extraction
WG49406	R56467	L9811250-01		Water	PCB's (Water)	8082/3550	12-NOV-1998	Extraction
WG49406	R56467	L9811250-05		Water	PCB's (Water)	8082/3550	12-NOV-1998	Extraction
WG49406	R56467	L9811250-06		Water	PCB's (Water)	8082/3550	12-NOV-1998	Extraction
WG49409	R56742	L9811250-02		Water	TCL Semivolatiles	8270C\3510C	12-NOV-1998	Semivolatile - GC/MS
WG49409	R56742	L9811250-05		Water	TCL Semivolatiles	8270C\3510C	12-NOV-1998	Semivolatile - GC/MS
WG49409	R56742	L9811250-06		Water	TCL Semivolatiles	8270C\3510C	12-NOV-1998	Semivolatile - GC/MS
WG49427	R56375	L9811250-01		Water	Total Suspended Solids	160.2	12-NOV-1998	Conventionals
WG49427	R56375	L9811250-03		Water	Total Suspended Solids	160.2	11-NOV-1998	Conventionals
WG49427	R56375	L9811250-04		Water	Total Suspended Solids	160.2	10-NOV-1998	Conventionals
WG49427	R56375	L9811250-05		Water	Total Suspended Solids	160.2	12-NOV-1998	Conventionals
WG49427	R56375	L9811250-06		Water	Total Suspended Solids	160.2	12-NOV-1998	Conventionals
WG49491	R56548	L9811250-01		Water	Organochlorine Pesticides	8081A\3510C	12-NOV-1998	Semivolatile - GC
WG49491	R56548	L9811250-05		Water	Organochlorine Pesticides	8081A\3510C	12-NOV-1998	Semivolatile - GC
WG49491	R56548	L9811250-06		Water	Organochlorine Pesticides	8081A\3510C	12-NOV-1998	Semivolatile - GC
WG49492	R56467	L9811250-01		Water	PCB's (Water)	8082/3550	12-NOV-1998	Semivolatile - GC
WG49492	R56467	L9811250-05		Water	PCB's (Water)	8082/3550	12-NOV-1998	Semivolatile - GC
WG49492	R56467	L9811250-06		Water	PCB's (Water)	8082/3550	12-NOV-1998	Semivolatile - GC
WG49540	R56480	L9811250-02		Water	TCL Volatiles	8260B	12-NOV-1998	Volatile - GC/MS
WG49540	R56480	L9811250-05		Water	TCL Volatiles	8260B	12-NOV-1998	Volatile - GC/MS
WG49540	R56480	L9811250-06		Water	TCL Volatiles	8260B	12-NOV-1998	Volatile - GC/MS

KEMRON ANALYST LIST

Ohio Valley Laboratory

10/28/98

ALC - - Ann L. Clark
BAD - - Becky A. Diehl
CEB - - Chad E. Barnes
CDB - - Christy D. Burton
CLH - - Chris L. Hurst
CMS - - Crystal M. Stevens
CRC - - Carla R. Cochran
DIH - - Deanna I. Hesson
DKM - - Dewey K. Miller
DLN - - Deanna L. Norton
DLP - - Dorothy L. Payne
ECL - - Eric C. Lawson
FEH - - Fay E. Harmon
HV - - Hema Vilasagar
JLH - - Janice L. Holland
JWR - - John W. Richards
JYH - - Ji Y. Hu
KHA - - Kim H. Archer
KMS - - Kevin M. Stutler
KRA - - Kathy R. Albertson
MDA - - Mike D. Albertson
MDC - - Michael D. Cochran
MES - - Mary E. Schiling
MLS - - Michael L. Schimmel
MMB - - Maren M. Beery
RDC - - Rebecca D. Cutlip
RDS - - Rebecca D. Sutton
REF - - Ron E. Fertile
REK - - Robert E. Kyer
RSS - - Regina S. Simmons
RWC - - Rodney W. Campbell
SJK - - Sindy J. Kinney
SJM - - Shawn J. Marshall
SLP - - Sheri L. Pfalzgraf
SLT - - Stephanie L. Tepe
SMW - - Shauna M. Welch
SPL - - Steve P. Learn
TJW - - Thomas J. Ware
TRS - - Todd R. Stack
VC - - Vicki Collier
VMN - - Vincent M. Nedeff

KEMRON Environmental Services, Inc.
LIST OF VALID QUALIFIERS (qual)
March 9, 1998

Qualifier	Description
(A)	See the report narrative
(B)	See the report narrative
(C)	See the report narrative
+	Correlation coefficient for the MSA is less than 0.995
<	Less than
>	Greater than
B	Present in the method blank
C	Confirmed by GC/MS
*	Surrogate or spike compound out of range
CG	Confluent growth
D	The analyte was quantified at a secondary dilution factor
DL	Surrogate or spike was diluted out
E	Estimated concentration due to sample matrix interference
F	Present below nominal reporting limit (AFCEE only)
FL	Free liquid
I	Semiquantitative result, out of instrument calibration range
J	Present below nominal reporting limit
L	Sample reporting limits elevated due to matrix interference
M	Duplicate injection precision not met

Qualifier	Description
N	Tentatively Identified Compound (TIC)
NA	Not applicable
ND	Not detected at or above the reporting limit (RL)
NF	Not found
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentration > 25% difference between the two GC columns
QNS	Quantity not sufficient to perform analysis
R	Analyte exceeds regulatory limit
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TNTC	Too numerous to count
U	Analyzed for but not detected
W	Post-digestion spike for furnace AA out of control limits
X	Can not be resolved from isomer. See below.

Special Notes for Organic Analytes

1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

INORGANIC QA/QC

Kemron
ENVIRONMENTAL SERVICES

KEMRON ENVIRONMENTAL SERVICES
OHIO VALLEY LABORATORY
QUALITY CONTROL SUMMARY

WORKGROUP: wg49427
METHOD: 160.2
MATRIX: Water
UNITS: mg/L

RUN DATE: 11/16/98
ANALYST: dlp
DUPLICATE: 11-252-03

ANALYTE	RDL	Blank	T-LCS	LCS	REP1	REP2	SAMPLE RESULT	T-MS	MS	PERCENT RECOVERY LCS	LCS LCL	LCS UCL	MS	MS LCL	MS UCL	PERCENT RPD REP RPD	RPD UCL
TSS	5.00	ND	50.00	49.00	832.00	838.00	NR	NR	NR	98.0	81.0	114.5	NR	NR	NR	0.72	20.00

NOTES & DEFINITIONS :

RDL = REPORTING DETECTION LIMIT
DL = DILUTED OUT
NA = NOT APPLICABLE
ND = NOT DETECTED
NR = NOT REQUIRED

LCS = LABORATORY CONTROL SAMPLE
T- LCS = TRUE VALUE OF LCS
REP1 = UNSPIKED SAMPLE REPLICATE 1
REP2 = UNSPIKED SAMPLE REPLICATE 2
SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX
T-MS = TRUE VALUE OF MATRIX SPIKE
MS = MATRIX SPIKE
LCL = LOWER CONTROL LIMIT
UCL = UPPER CONTROL LIMIT

REP RPD = RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES

ORGANIC QA/QC

Kemron
ENVIRONMENTAL SERVICES

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49540	Run Date:	11/18/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_2	SMPL Num:	11-069-02	SMPL DF:	10
Matrix:	Water	BLK FLNM:	2BK27619	SMPL FLNM:	2BR27622	MS DF:	10
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	2BR27623.D	MSD DF:	10
		LCS FLNM:	2QC27620.D	MSD FLNM:	2BR27624.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
dichlorodifluoromethane	10.0	ND	ND	17.4	NA	20.0	ND	16.9	15.5	20.0	86.9	NA	38.0	148.0	84.7	77.5	60.0	140.0	8.8	20.0
chloromethane	10.0	ND	ND	15.4	NA	20.0	ND	16.5	16.2	20.0	76.9	NA	56.0	132.0	82.7	81.2	D	273.0	1.8	20.0
vinyl chloride	10.0	ND	ND	17.4	NA	20.0	ND	18.1	17.0	20.0	87.1	NA	68.0	125.0	90.5	84.8	D	251.0	6.5	20.0
bromomethane	10.0	ND	ND	20.2	NA	20.0	ND	21.0	20.3	20.0	100.9	NA	55.0	138.0	105.0	101.3	D	242.0	3.6	20.0
chloroethane	10.0	ND	ND	19.9	NA	20.0	ND	19.8	18.8	20.0	99.5	NA	70.0	128.0	98.8	94.2	14.0	230.0	4.7	20.0
trichlorofluoromethane	10.0	ND	ND	20.1	NA	20.0	ND	20.9	19.3	20.0	100.7	NA	70.0	127.0	104.4	96.7	17.0	181.0	7.7	20.0
freon 113	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	70.0	130.0	NA	20.0
acetone	100.0	ND	ND	22.4	NA	20.0	19.0	53.6	42.4	20.0	112.1	NA	44.0	114.0	172.8	117.0	70.0	130.0	23.3	20.0
1,1-dichloroethene	5.0	ND	ND	16.1	NA	20.0	ND	15.4	14.4	20.0	80.4	NA	69.0	144.0	77.1	72.2	D	234.0	6.6	20.0
iodomethane	NTC	ND	ND	23.0	NA	20.0	ND	23.4	21.8	20.0	115.0	NA	NA	NA	117.1	108.9	70.0	130.0	7.3	20.0
methylene chloride	5.0	ND	ND	28.3	NA	20.0	3.4	29.7	29.3	20.0	141.7	NA	71.0	128.0	131.4	129.6	D	221.0	1.2	20.0
carbon disulfide	5.0	ND	ND	22.3	NA	20.0	ND	21.8	20.4	20.0	111.4	NA	67.0	136.0	109.0	102.2	70.0	130.0	6.4	20.0
acrylonitrile	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	70.0	130.0	NA	20.0
trans-1,2-dichloroethene	5.0	ND	ND	24.6	NA	20.0	ND	24.8	24.1	20.0	123.1	NA	85.0	133.0	124.0	120.4	54.0	156.0	2.9	20.0
vinyl acetate	10.0	ND	ND	34.2	NA	20.0	ND	39.3	37.5	20.0	171.2	NA	9.0	236.0	196.6	187.7	9.0	236.0	4.7	20.0
1,1-dichloroethane	5.0	ND	ND	23.1	NA	20.0	ND	22.9	22.8	20.0	115.5	NA	82.0	124.0	114.5	113.9	59.0	155.0	0.5	20.0
2-butanone	100.0	ND	ND	26.4	NA	20.0	3.6	36.9	31.4	20.0	132.2	NA	43.0	140.0	166.7	139.2	70.0	130.0	16.1	20.0
2,2-dichloropropane	5.0	ND	ND	22.5	NA	20.0	ND	21.4	20.3	20.0	112.6	NA	77.0	126.0	107.0	101.3	60.0	140.0	5.5	20.0
cis-1,2-dichloroethene	5.0	ND	ND	21.6	NA	20.0	ND	21.8	21.4	20.0	107.9	NA	69.0	130.0	108.8	107.1	60.0	140.0	1.6	20.0
chloroform	5.0	ND	ND	22.4	NA	20.0	ND	22.3	22.0	20.0	112.1	NA	83.0	121.0	111.4	109.9	51.0	138.0	1.4	20.0

Notes and Definitions:

RDL = *Reporting Detection Limit*
BLK = Method Blank
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LCS = Laboratory Control Sample
LCS2 = Second Laboratory Control Sample
SMPL = Sample Results
MS/MSD = Matrix Spike / Matrix Spike Duplicate
LCL = Lower Control Limit
UCL = Upper Control Limit
RPD = Relative Percent Difference

ND = Not Detected
NA = Not Applicable

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49540	Run Date:	11/18/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_2	SMPL Num:	11-069-02	SMPL DF:	10
Matrix:	Water	BLK FLNM:	2BK27619	SMPL FLNM:	2BR27622	MS DF:	10
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	2BR27623.D	MSD DF:	10
		LCS FLNM:	2QC27620.D	MSD FLNM:	2BR27624.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
	RDL	BLK	BLK2	LCS	LCS2	LCS Spike Level	SMPL	MS	MSD	MS Spike Level	LCS	LCS2	LCS LCL	LCS UCL	MS	MSD	MS LCL	MS UCL	MS RPD	RPD UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
bromochloromethane	5.0	ND	ND	22.4	NA	20.0	ND	23.3	23.4	20.0	111.9	NA	85.0	118.0	116.6	117.0	60.0	140.0	0.3	20.0
1,1,1-trichloroethane	5.0	ND	ND	22.3	NA	20.0	ND	21.5	20.5	20.0	111.6	NA	74.0	125.0	107.5	102.7	52.0	162.0	4.6	20.0
1,1-dichloropropene	5.0	ND	ND	23.8	NA	20.0	ND	23.9	22.7	20.0	118.8	NA	85.0	126.0	119.7	113.6	60.0	140.0	5.2	20.0
carbon tetrachloride	5.0	ND	ND	22.5	NA	20.0	ND	21.8	20.7	20.0	112.7	NA	73.0	129.0	109.1	103.7	70.0	140.0	5.0	20.0
1,2-dichloroethane	5.0	ND	ND	22.9	NA	20.0	ND	23.9	23.3	20.0	114.4	NA	76.0	123.0	119.3	116.3	49.0	155.0	2.5	20.0
benzene	5.0	ND	ND	21.9	NA	20.0	15.8	36.7	37.1	20.0	109.4	NA	86.0	119.0	104.5	106.4	37.0	151.0	1.0	20.0
trichloroethene	5.0	ND	ND	21.8	NA	20.0	ND	21.4	21.3	20.0	108.8	NA	82.0	120.0	106.8	106.7	71.0	157.0	0.1	20.0
1,2-dichloropropane	5.0	ND	ND	22.5	NA	20.0	ND	23.5	23.7	20.0	112.5	NA	74.0	126.0	117.6	118.3	D	210.0	0.6	20.0
bromodichloromethane	5.0	ND	ND	23.1	NA	20.0	ND	23.3	23.2	20.0	115.6	NA	74.0	126.0	116.3	116.0	35.0	155.0	0.2	20.0
dibromomethane	5.0	ND	ND	23.3	NA	20.0	ND	25.0	24.7	20.0	116.6	NA	78.0	125.0	125.1	123.4	60.0	140.0	1.4	20.0
2-chloroethylvinyl-ether	10.0	ND	ND	20.5	NA	20.0	ND	12.0	8.5	20.0	102.3	NA	68.0	144.0	59.8	42.5	70.0	130.0	33.7	20.0
4-methyl-2-pentanone	10.0	ND	ND	21.3	NA	20.0	13.1	45.5	41.2	20.0	106.7	NA	70.0	127.0	162.2	140.7	70.0	130.0	9.9	20.0
cis-1,3-dichloropropene	5.0	ND	ND	23.4	NA	20.0	ND	23.0	23.6	20.0	116.9	NA	77.0	123.0	115.1	118.1	D	227.0	2.6	20.0
toluene	5.0	ND	ND	23.2	NA	20.0	91.8	109.9	111.1	20.0	115.8	NA	83.0	119.0	90.7	96.7	47.0	150.0	1.1	20.0
trans-1,3-dichloropropene	5.0	ND	ND	22.8	NA	20.0	ND	23.6	23.5	20.0	113.9	NA	74.0	124.0	117.8	117.5	17.0	183.0	0.2	20.0
1,1,2-trichloroethane	5.0	ND	ND	22.0	NA	20.0	ND	24.5	23.8	20.0	110.2	NA	72.0	119.0	122.7	118.9	52.0	150.0	3.1	20.0
2-hexanone	10.0	ND	ND	23.5	NA	20.0	ND	30.0	29.3	20.0	117.7	NA	55.0	114.0	150.1	146.5	70.0	130.0	2.4	20.0
1,3-dichloropropane	5.0	ND	ND	22.8	NA	20.0	ND	24.6	24.0	20.0	113.9	NA	73.0	122.0	122.9	120.0	60.0	140.0	2.4	20.0
tetrachloroethene	5.0	ND	ND	21.8	NA	20.0	ND	20.9	20.7	20.0	109.2	NA	82.0	120.0	104.5	103.5	64.0	148.0	1.0	20.0
dibromochloromethane	5.0	ND	ND	22.2	NA	20.0	ND	23.4	23.5	20.0	111.0	NA	72.0	121.0	117.2	117.3	53.0	149.0	0.1	20.0

Notes and Definitions:

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KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49540	Run Date:	11/18/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_2	SMPL Num:	11-069-02	SMPL DF:	10
Matrix:	Water	BLK FLNM:	2BK27619	SMPL FLNM:	2BR27622	MS DF:	10
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	2BR27623.D	MSD DF:	10
		LCS FLNM:	2QC27620.D	MSD FLNM:	2BR27624.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
1,2-dibromoethane	5.0	ND	ND	22.5	NA	20.0	ND	24.9	24.6	20.0	112.7	NA	75.0	121.0	124.3	123.0	60.0	140.0	1.1	20.0
chlorobenzene	5.0	ND	ND	21.4	NA	20.0	ND	21.2	20.8	20.0	107.0	NA	83.0	120.0	105.9	104.2	37.0	160.0	1.8	20.0
1,1,1,2-tetrachloroethane	5.0	ND	ND	22.1	NA	20.0	ND	21.9	22.2	20.0	110.3	NA	79.0	118.0	109.4	110.9	60.0	140.0	1.4	20.0
ethylbenzene	5.0	ND	ND	22.2	NA	20.0	45.3	65.9	65.5	20.0	111.0	NA	82.0	119.0	103.0	101.1	37.0	162.0	0.6	20.0
m+p-xylene	5.0	ND	ND	43.4	NA	40.0	122.2	162.1	161.0	40.0	108.4	NA	81.0	121.0	99.8	97.1	60.0	140.0	0.7	20.0
o-xylene	5.0	ND	ND	22.2	NA	20.0	86.4	106.9	107.3	20.0	110.8	NA	81.0	199.0	102.3	104.5	60.0	140.0	0.4	20.0
styrene	5.0	ND	ND	21.8	NA	20.0	ND	23.9	24.3	20.0	109.1	NA	81.0	118.0	119.5	121.4	60.0	140.0	1.6	20.0
bromoform	5.0	ND	ND	21.9	NA	20.0	ND	23.7	23.7	20.0	109.5	NA	68.0	129.0	118.7	118.3	45.0	169.0	0.3	20.0
isopropylbenzene	5.0	ND	ND	21.3	NA	20.0	6.0	26.6	26.2	20.0	106.6	NA	81.0	121.0	102.8	101.2	60.0	140.0	1.3	20.0
1,1,2,2-tetrachloroethane	5.0	ND	ND	23.7	NA	20.0	ND	28.0	27.3	20.0	118.5	NA	61.0	137.0	140.1	136.5	46.0	157.0	2.6	20.0
1,2,3-trichloropropane	5.0	ND	ND	21.9	NA	20.0	ND	26.8	25.1	20.0	109.3	NA	72.0	130.0	134.2	125.5	60.0	140.0	6.7	20.0
trans-1,4-dichloro-2-butene	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	20.0
propyl-benzene	5.0	ND	ND	22.5	NA	20.0	12.9	33.3	33.9	20.0	112.3	NA	69.0	135.0	101.9	104.9	60.0	140.0	1.8	20.0
bromobenzene	5.0	ND	ND	22.1	NA	20.0	ND	21.7	22.0	20.0	110.6	NA	86.0	118.0	108.4	110.2	60.0	140.0	1.6	20.0
1,3,5-trimethylbenzene	5.0	ND	ND	22.4	NA	20.0	19.9	42.9	45.1	20.0	111.9	NA	83.0	121.0	115.0	126.0	60.0	140.0	5.0	20.0
2-chlorotoluene	5.0	ND	ND	23.3	NA	20.0	ND	20.5	22.1	20.0	116.5	NA	80.0	126.0	102.7	110.3	60.0	140.0	7.2	20.0
4-chlorotoluene	5.0	ND	ND	23.3	NA	20.0	ND	24.0	22.9	20.0	116.5	NA	80.0	125.0	120.1	114.5	60.0	140.0	4.8	20.0
tert-butyl-benzene	5.0	ND	ND	22.0	NA	20.0	ND	19.3	18.6	20.0	110.0	NA	79.0	114.0	96.6	93.1	60.0	140.0	3.7	20.0
1,2,4-trimethylbenzene	5.0	ND	ND	22.8	NA	20.0	94.2	114.7	117.2	20.0	113.9	NA	84.0	121.0	102.8	115.2	60.0	140.0	2.2	20.0
sec-butyl-benzene	5.0	ND	ND	21.8	NA	20.0	2.1	22.2	21.8	20.0	108.9	NA	81.0	122.0	100.8	98.3	60.0	140.0	2.1	20.0

Notes and Definitions:

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VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49540	Run Date:	11/18/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_2	SMPL Num:	11-069-02	SMPL DF:	10
Matrix:	Water	BLK FLNM:	2BK27619	SMPL FLNM:	2BR27622	MS DF:	10
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	2BR27623.D	MSD DF:	10
		LCS FLNM:	2QC27620.D	MSD FLNM:	2BR27624.D		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
	RDL	BLK	BLK2	LCS	LCS2	LCS Spike Level	SMPL	MS	MSD	MS Spike Level	LCS	LCS2	LCS LCL	LCS UCL	MS	MSD	MS LCL	MS UCL	MS RPD	RPD UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
p-isopropyl-toluene	5.0	ND	ND	21.1	NA	20.0	2.2	21.7	21.6	20.0	105.4	NA	80.0	119.0	97.3	96.7	60.0	140.0	0.6	20.0
1,3-dichlorobenzene	5.0	ND	ND	22.3	NA	20.0	ND	21.5	21.6	20.0	111.6	NA	85.0	119.0	107.6	108.1	60.0	140.0	0.4	20.0
1,4-dichlorobenzene	5.0	ND	ND	21.8	NA	20.0	ND	20.7	21.3	20.0	109.2	NA	82.0	122.0	103.4	106.7	18.0	190.0	3.1	20.0
n-butyl-benzene	5.0	ND	ND	22.4	NA	20.0	3.8	24.1	23.9	20.0	112.2	NA	60.0	125.0	101.7	100.6	60.0	140.0	1.0	20.0
1,2-dichlorobenzene	5.0	ND	ND	22.1	NA	20.0	ND	21.8	22.2	20.0	110.3	NA	86.0	119.0	109.1	111.1	19.0	190.0	1.8	20.0
1,2-dibromo-3-chloropropane	5.0	ND	ND	22.1	NA	20.0	ND	26.3	23.8	20.0	110.3	NA	66.0	134.0	131.3	119.1	60.0	140.0	9.7	20.0
1,2,4-trichlorobenzene	5.0	ND	ND	21.7	NA	20.0	ND	20.7	21.0	20.0	108.5	NA	78.0	122.0	103.6	105.0	60.0	140.0	1.3	20.0
hexachlorobutadiene	5.0	ND	ND	21.6	NA	20.0	ND	19.6	18.3	20.0	108.1	NA	73.0	125.0	97.9	91.7	60.0	140.0	6.5	20.0
napthalene	10.0	ND	ND	21.2	NA	20.0	17.2	44.4	41.5	20.0	106.1	NA	74.0	148.0	136.2	121.4	60.0	140.0	6.9	20.0
1,2,3-trichlorobenzene	5.0	ND	ND	21.8	NA	20.0	ND	21.2	21.2	20.0	109.0	NA	74.0	124.0	106.0	106.2	60.0	140.0	0.2	20.0

BLK2 = Second Method Blank
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KEMRON ENVIRONMENTAL SERVICES , OVL
SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP : WG49409
METHOD : 8270
MATRIX : WATER
CONCENTRATION UNITS : UG/L
PREP WORK GRP : WG49312

EXT DATE : 11/13/98
BENCH SHEET : V105P10
BLK FLNM : 8659.D*
LCS FLNM: 8660.D*

RUN DATE : 11/16/98
SMPL ID : L9810246-01
SMPL FLNM : 8677.D*
MS FLNM : 8678.D*
MSD FLNM : 8679.D*

INSTRUMENT : HPMS5
ANALYST : mdc

ANALYTE	CONCENTRATION , ug/L								PERCENT RECOVERY , %									PERCENT			BEYOND LIMITS				
	RDL	BLANK	LCS SPIKE ADDED	LCS	SAMPLE	MS SPIKE ADDED	MS	MSD	BLANK	LCS	LCS LCL	LCS UCL	SAMPLE	MS	MSD	MS LCL	MS UCL	MSD RPD	RPD UCL	RPD > LIMIT	SAMPLE	BLANK	LCS	MS	MSD
PYRIDINE	5.0	ND	100	12.2	23.2	200	66.1	71.5	NA	12.2	5	150	NA	21.4	24.2	5	150	8	40						
N-NITROSODIMETHYLAMINE	5.0	ND	100	29.5	ND	200	76.4	71.3	NA	29.5	5	150	NA	38.2	35.7	5	150	7	40						
ANILINE	10.0	ND	100	24.4	ND	200	ND	ND	NA	24.4	5	150	NA	ND	ND	5	150	NA	40						
PHENOL	5.0	ND	100	28.1	ND	200	97.9	100.3	NA	28.1	5	112	NA	48.9	50.2	5	112	2	40						
BIS(2-CHLOROETHYL)ETHER	5.0	ND	100	59.2	ND	200	233.9	235.2	NA	59.2	12	158	NA	116.9	117.6	12	158	1	40						
2-CHLOROPHENOL	5.0	ND	100	58.4	ND	200	52.6	49.5	NA	58.4	23	134	NA	26.4	24.7	23	134	7	40						
1,3-DICHLOROBENZENE	5.0	ND	100	53.1	ND	200	141.3	139.2	NA	53.1	5	172	NA	70.7	69.6	5	172	2	40						
1,4-DICHLOROBENZENE	10.0	ND	100	54.8	ND	200	135.4	133.0	NA	54.8	20	124	NA	67.7	66.5	20	124	2	40						
BENZYL ALCOHOL	5.0	ND	100	54.3	3499	200	3207.5	3245.4	NA	54.3	5	150	NA	NA	NA	5	150	1	40						
1,2-DICHLOROBENZENE	5.0	ND	100	55.2	ND	200	139.5	136.5	NA	55.2	32	129	NA	69.8	68.2	32	129	2	40						
2-METHYLPHENOL	5.0	ND	100	59.5	ND	200	156.4	162.0	NA	59.5	5	150	NA	78.2	81.0	5	150	3	40						
BIS(2-CHLOROISOPROPYL)ETH	5.0	ND	100	61.1	ND	200	163.7	163.4	NA	61.1	36	166	NA	81.8	81.7	36	166	0	40						
3- & 4-METHYLPHENOL	5.0	ND	100	53.5	ND	200	153.4	157.0	NA	53.5	5	150	NA	76.7	78.5	5	150	2	40						
N-NITROSO-DI-N-PROPYLAMIN	5.0	ND	100	63.2	ND	200	166.7	165.7	NA	63.2	5	230	NA	83.3	82.8	5	230	1	40						
HEXACHLOROETHANE	5.0	ND	100	55.6	ND	200	138.4	135.7	NA	55.6	40	113	NA	69.2	67.9	40	113	2	40						
NITROBENZENE	5.0	ND	100	63.5	ND	200	168.7	168.3	NA	63.5	35	180	NA	84.3	84.1	35	180	0	40						
ISOPHORONE	5.0	ND	100	74.6	ND	200	177.2	177.9	NA	74.6	21	196	NA	88.6	89.0	21	196	0	40						
2-NITROPHENOL	5.0	ND	100	68.0	ND	200	170.2	171.7	NA	68.0	29	182	NA	85.1	85.9	29	182	1	40						
2,4-DIMETHYLPHENOL	5.0	ND	100	76.6	ND	200	106.0	491.4	NA	76.6	32	119	NA	53.0	245.7	32	119	129	40	*					H
BIS(2-CHLOROETHOXY)METHA	25.0	ND	100	61.5	ND	200	153.8	152.3	NA	61.5	33	184	NA	76.9	76.1	33	184	1	40						
BENZOIC ACID	5.0	ND	100	5.6	ND	200	252.8	256.7	NA	5.6	5	150	NA	126.4	128.3	5	150	2	40						
2,4-DICHLOROPHENOL	5.0	ND	100	69.2	ND	200	202.3	209.8	NA	69.2	39	135	NA	101.2	104.9	39	135	4	40						
1,2,4-TRICHLOROBENZENE	5.0	ND	100	57.3	ND	200	156.6	155.7	NA	57.3	44	142	NA	78.3	77.8	44	142	1	40						
NAPHTHALENE	5.0	ND	100	63.1	ND	200	170.4	170.4	NA	63.1	21	133	NA	85.2	85.2	21	133	0	40						
4-CHLOROANILINE	5.0	ND	100	35.9	ND	200	26.0	31.7	NA	35.9	5	150	NA	13.0	15.8	5	150	20	40						
HEXACHLOROBUTADIENE	10.0	ND	100	61.0	ND	200	166.3	165.4	NA	61.0	24	116	NA	83.1	82.7	24	116	1	40						
4-CHLORO-3-METHYLPHENOL	5.0	ND	100	86.4	ND	200	206.8	211.4	NA	86.4	22	147	NA	103.4	105.7	22	147	2	40						
2-METHYLNAPHTHALENE	5.0	ND	100	66.7	ND	200	189.7	189.7	NA	66.7	5	150	NA	94.9	94.8	5	150	0	40						
HEXACHLOROCYCLOPENTADI	5.0	ND	100	33.4	ND	200	37.1	34.7	NA	33.4	5	150	NA	18.5	17.3	5	150	7	40						
2,4,6-TRICHLOROPHENOL	25.0	ND	100	80.5	ND	200	214.8	220.0	NA	80.5	37	144	NA	107.4	110.0	37	144	2	40						
2,4,5-TRICHLOROPHENOL	5.0	ND	100	91.3	ND	200	198.3	203.1	NA	91.3	5	150	NA	99.1	101.6	5	150	2	40						
2-CHLORONAPHTHALENE	25.0	ND	100	70.6	ND	200	183.9	182.5	NA	70.6	60	118	NA	91.9	91.2	60	118	1	40						
2-NITROANILINE	5.0	ND	100	74.0	ND	200	19.2	20.5	NA	74.0	5	150	NA	9.6	10.3	5	150	7	40						
DIMETHYLPHTHALATE	5.0	ND	100	86.0	ND	200	200.0	202.6	NA	86.0	5	112	NA	100.0	101.3	5	112	1	40						
ACENAPHTHYLENE	5.0	ND	100	78.0	ND	200	208.7	208.1	NA	78.0	33	145	NA	104.3	104.0	33	145	0	40						
2,6-DINITROTOLUENE	5.0	ND	100	86.9	ND	200	341.7	346.4	NA	86.9	50	158	NA	170.8	173.2	50	158	1	40				H	H	
3-NITROANILINE	25.0	ND	100	56.6	ND	200	65.5	72.7	NA	56.6	5	150	NA	32.7	36.4	5	150	11	40						
ACENAPHTHENE	5.0	ND	100	78.5	ND	200	194.6	192.4	NA	78.5	47	145	NA	97.3	96.2	47	145	1	40						
2,4-DINITROPHENOL	25.0	ND	100	52.0	ND	200	ND	ND	NA	52.0	5	191	NA	ND	ND	5	191	NA	40						
4-NITROPHENOL	25.0	ND	100	43.3	ND	200	104.1	104.8	NA	43.3	5	132	NA	52.0	52.4	5	132	1	40						
DIBENZOFURAN	5.0	ND	100	83.2	ND	200	206.9	209.5	NA	83.2	5	150	NA	103.5	104.7	5	150	1	40						
2,4-DINITROTOLUENE	5.0	ND	100	105.6	ND	200	211.1	215.9	NA	105.6	39	139	NA	105.6	107.9	39	139	2	40						

NOTES & DEFINITIONS :
NA = NOT APPLICABLE
ND = NOT DETECTED
RDL = REPORTING DETECTION LIMIT

NS = NOT SPIKED
L= below QC limit
H=above QC limit

KEMRON ENVIRONMENTAL SERVICES , OVL
SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP : WG49409
METHOD : 8270
MATRIX : WATER
CONCENTRATION UNITS : UG/L
PREP WORK GRP : WG49312

EXT DATE : 11/13/98
BENCH SHEET : V105P10
BLK FLNM : 8659.D*
LCS FLNM: 8660.D*

RUN DATE : 11/16/98
SMPL ID : L9810246-01
SMPL FLNM : 8677.D*
MS FLNM : 8678.D*
MSD FLNM : 8679.D*

INSTRUMENT : HPMS5
ANALYST : mdc

ANALYTE	RDL	CONCENTRATION , ug / L							PERCENT RECOVERY , %									PERCENT			BEYOND LIMITS				
		BLANK	LCS SPIKE ADDED	LCS	SAMPLE	MS SPIKE ADDED	MS	MSD	BLANK	LCS	LCS LCL	LCS UCL	SAMPLE	MS	MSD	MS LCL	MS UCL	MSD RPD	RPD UCL	BEYOND RPD LIMIT	SAMPLE	BLANK	LCS	MS	MSD
DIETHYLPHTHALATE	5.0	ND	100	98.6	ND	200	217.2	220.6	NA	98.6	5	114	NA	108.6	110.3	5	114	2	40						
FLUORENE	5.0	ND	100	90.3	ND	200	224.4	225.8	NA	90.3	25	158	NA	112.2	112.9	25	158	1	40						
4-CHLOROPHENYL-PHENYL ET	5.0	ND	100	85.3	ND	200	225.2	226.3	NA	85.3	59	121	NA	112.6	113.2	59	121	1	40						
4-NITROANILINE	25.0	ND	100	91.2	ND	200	94.4	18.0	NA	91.2	5	150	NA	47.2	9.0	5	150	136	40	*					
1,2-DIPHENYLHYDRAZINE *	5.0	ND	100	75.7	ND	200	167.6	169.9	NA	75.7	5	150	NA	83.8	84.9	5	150	1	40						
4,6-DINITRO-2-METHYLPHENO	25.0	ND	100	94.7	ND	200	123.6	131.2	NA	94.7	5	181	NA	61.8	65.6	5	181	6	40						
N-NITROSODIPHENYLAMINE **	5.0	ND	100	101.3	ND	200	226.7	230.6	NA	101.3	5	150	NA	113.4	115.3	5	150	2	40						
4-BROMOPHENYL-PHENYL ET	5.0	ND	100	81.6	ND	200	199.8	202.9	NA	81.6	53	127	NA	99.9	101.5	53	127	2	40						
HEXACHLOROBENZENE	5.0	ND	100	102.0	ND	200	218.3	220.6	NA	102.0	5	152	NA	109.1	110.3	5	152	1	40						
PENTACHLOROPHENOL	25.0	ND	100	95.3	ND	200	193.1	203.1	NA	95.3	14	176	NA	96.5	101.5	14	176	5	40						
PHENANTHRENE	5.0	ND	100	108.3	ND	200	224.2	227.3	NA	108.3	54	120	NA	112.1	113.6	54	120	1	40						
ANTHRACENE	5.0	ND	100	108.0	ND	200	217.7	221.5	NA	108.0	27	133	NA	108.9	110.7	27	133	2	40						
CARBAZOLE	5.0	ND	100	95.8	ND	200	184.8	185.7	NA	95.8	5	150	NA	92.4	92.9	5	150	0	40						
DI-N-BUTYLPHTHALATE	5.0	ND	100	117.5	ND	200	218.6	224.3	NA	117.5	1	118	NA	109.3	112.1	1	118	3	40						
FLUORANTHENE	5.0	ND	100	119.3	ND	200	227.7	233.3	NA	119.3	26	137	NA	113.8	116.7	26	137	2	40						
PYRENE	5.0	ND	100	117.1	ND	200	222.9	232.1	NA	117.1	52	115	NA	111.5	116.0	52	115	4	40				H		H
BUTYLBENZYLPHTHALATE	5.0	ND	100	121.9	ND	200	227.2	234.3	NA	121.9	5	152	NA	113.6	117.1	5	152	3	40						
BENZO(A)ANTHRACENE	10.0	ND	100	115.5	ND	200	222.4	228.8	NA	115.5	5	262	NA	111.2	114.4	5	262	3	40						
3,3'-DICHLOROBENZIDINE	5.0	ND	100	123.5	ND	200	96.5	99.4	NA	123.5	33	143	NA	48.3	49.7	33	143	3	40						
CHRYSENE	5.0	ND	100	120.5	ND	200	229.3	234.4	NA	120.5	17	168	NA	114.6	117.2	17	168	2	40						
BIS(2-ETHYLHEXYL)PHTHALAT	5.0	ND	100	127.2	ND	200	234.4	240.9	NA	127.2	8	158	NA	117.2	120.5	8	158	3	40						
DI-N-OCTYLPHTHALATE	5.0	ND	100	110.3	ND	200	260.4	292.5	NA	110.3	4	146	NA	130.2	146.3	4	146	12	40						H
BENZO(B)FLUORANTHENE	5.0	ND	100	108.2	ND	200	241.3	254.7	NA	108.2	24	159	NA	120.7	127.3	24	159	5	40						
BENZO(K)FLUORANTHENE	5.0	ND	100	114.9	ND	200	250.8	269.8	NA	114.9	11	162	NA	125.4	134.9	11	162	7	40						
BENZO(A)PYRENE	5.0	ND	100	113.5	ND	200	221.5	232.4	NA	113.5	17	163	NA	110.7	116.2	17	163	5	40						
INDENO(1,2,3-CD)PYRENE	5.0	ND	100	131.1	ND	200	162.0	158.2	NA	131.1	5	171	NA	81.0	79.1	5	171	2	40						
DIBENZ(A,H)ANTHRACENE	5.0	ND	100	140.4	ND	200	170.2	164.4	NA	140.4	5	227	NA	85.1	82.2	5	227	3	40						
BENZO(G,H,I)PERYLENE	5.0	ND	100	143.8	ND	200	159.7	153.8	NA	143.8	5	219	NA	79.8	76.9	5	219	4	40						
SURROGATES																									
2-FLUOROPHENOL		43.8	100	41.3	51.1	100	46.8	49.9	43.8	41.3	21	100	51.1	46.8	49.9	21	100								
PHENOL - D5		26.7	100	27.0	60.1	100	48.9	49.2	26.7	27.0	10	94	60.1	48.9	49.2	10	94								
NITROBENZENE - D5		32.2	50	31.4	45.2	50	40.9	41.1	64.3	62.9	35	114	90.5	81.7	82.2	35	114								
2-FLUOROBIPHENYL		38.0	50	39.2	50.4	50	51.4	51.0	72.1	78.5	43	116	100.8	102.9	102.1	43	116								
2,4,6-TRIBROMOPHENOL		99.6	100	115.8	114.8	100	120.9	124.1	99.6	115.8	10	123	114.8	120.9	124.1	10	123								H
p-TERPHENYL - D14		65.8	50	67.9	64.0	50	63.2	65.8	131.6	135.8	33	141	128.1	126.4	131.6	33	141								

NOTES & DEFINITIONS : NS = NOT SPIKED

KEMRON ENVIRONMENTAL SERVICES
MARIETTA, OH
QUALITY CONTROL SUMMARY / 8081 WATERS , FRONT

INSTRUMENT : HP9

EXT'N DATE : 11/17/98 ANALYST : ECL BLK FLNM : 1431 SAMPLE ID : NA
EXT'N BENCH SHT : V105P25 RUN DATE : 11/18/98 LCS FLNM : 1432 SMPL FLNM : NA
EXT'N WORK GRP : WG49404 ANAL WORK GRP : WG49491 MS FLNM : NA
MSD FLNM : NA

COMPOUND	RDL	CONCENTRATION , ug/L					% RECOVERY						PERCENT				
		Blank	LCS	Sample	MS	MSD	Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	MS/MSD RPD	RPD Advisory Limits	Blank LCS Sample MS MSD
ALPHA-BHC	0.05	ND	0.238	ND	NA	NA	NA	47.6	37	134	NA	#######	#######	51	145	NA	0-43	
GAMMA-BHC	0.05	ND	0.309	ND	NA	NA	NA	61.8	32	127	NA	#######	#######	54	134	NA	0-38	# #
BETA-BHC	0.05	ND	0.398	ND	NA	NA	NA	79.6	17	147	NA	#######	#######	51	129	NA	0-28	# #
HEPTACHLOR	0.05	ND	0.287	ND	NA	NA	NA	57.4	34	111	NA	#######	#######	40	139	NA	0-37	# #
DELTA-BHC	0.05	ND	0.465	ND	NA	NA	NA	93.0	19	140	NA	#######	#######	56	138	NA	0-78	# #
ALDRIN	0.05	ND	0.280	ND	NA	NA	NA	56.0	42	122	NA	#######	#######	28	143	NA	0-88	# #
HEPTACHLOR EPOXIDE	0.05	ND	0.377	ND	NA	NA	NA	75.4	37	142	NA	#######	#######	51	135	NA	0-40	# #
GAMMA-CHLORDANE	0.05	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40	
ALPHA-CHLORDANE	0.05	ND	NA	ND	NA	NA	NA	NA	54	119	NA	NA	NA	45	115	NA	0-17	
ENDOSULFAN I	0.05	ND	0.301	ND	NA	NA	NA	60.2	45	153	NA	#######	#######	32	123	NA	0-22	# #
4,4-DDE	0.10	ND	0.430	ND	NA	NA	NA	86.0	30	145	NA	#######	#######	64	152	NA	0-23	# #
DIELDRIN	0.10	ND	0.441	ND	NA	NA	NA	88.2	36	146	NA	#######	#######	23	171	NA	0-20	# #
ENDRIN	0.10	ND	0.423	ND	NA	NA	NA	84.6	30	147	NA	#######	#######	56	154	NA	0-28	# #
4,4-DDD	0.10	ND	0.467	ND	NA	NA	NA	93.4	31	141	NA	#######	#######	56	179	NA	0-30	# #
ENDOSULFAN II	0.10	ND	0.371	ND	NA	NA	NA	74.2	D	202	NA	#######	#######	21	117	NA	0-18	# #
4,4-DDT	0.10	ND	0.471	ND	NA	NA	NA	94.2	25	160	NA	#######	#######	42	158	NA	0-22	# #
ENDRIN ALDEHYDE	0.10	ND	0.272	ND	NA	NA	NA	54.4	NA	NA	NA	#######	#######	21	115	NA	0-40	# #
ENDOSULFAN SULFATE	0.10	ND	0.348	ND	NA	NA	NA	69.6	26	144	NA	#######	#######	31	117	NA	0-30	# #
METHOXYCHLOR	0.50	ND	0.446	ND	NA	NA	NA	89.2	NA	NA	NA	#######	#######	26	196	NA	0-19	# #
ENDRIN KETONE	0.10	ND	0.430	ND	NA	NA	NA	86.0	NA	NA	NA	#######	#######	NA	NA	NA		
Tech-CHLORDANE	1.00	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40	
TOXAPHENE	1.00	ND	NA	ND	NA	NA	NA	NA	41	126	NA	NA	NA	40	125	NA	0-40	
SURROGATES																		
2,4,5,6-TETRACHLORO-M-XYLENE		8.56	7.61	NA	NA	NA	41.9	38.1	13	154	NA	NA	NA	10	154			
DECACHLOROBIPHENYL		17.7	17.8	NA	NA	NA	88.6	88.9	25	140	NA	NA	NA	25	140			

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 0.5 ug/L
SURROGATES spiked at 20 ug/L
NA = NOT APPLICABLE
DL = DILUTED OUT
ND = NOT DETECTED
RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE
MS=MATRIX SPIKE
MSD=MATRIX SPIKE DUPLICATE

KEMRON ENVIRONMENTAL SERVICES
MARIETTA, OH
QUALITY CONTROL SUMMARY / 8081 WATERS , REAR

INSTRUMENT : HP9

EXT'N DATE : 11/17/98 ANALYST : ECL BLK FLNM : 1431 SAMPLE ID : NA
EXT'N BENCH SHT : V105P25 RUN DATE : 11/18/98 LCS FLNM : 1432 SMPL FLNM : NA
EXT'N WORK GRP : WG49404 ANAL WORK GRP : WG49491 MS FLNM : NA
MSD FLNM : NA

COMPOUND	RDL	CONCENTRATION , ug/L Blank	LCS	Sample	MS	MSD	% RECOVERY Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	PERCENT MS/MSD RPD	RPD Advisory Limits	Blank	LCS	Sample	MS	MSD
ALPHA-BHC	0.05	ND	0.237	ND	NA	NA	NA	47.4	37	134	NA	#######	#######	51	145	NA	0-43			#	#	
GAMMA-BHC	0.05	ND	0.286	ND	NA	NA	NA	57.2	32	127	NA	#######	#######	54	134	NA	0-18			#	#	
BETA-BHC	0.05	ND	0.373	ND	NA	NA	NA	74.6	17	147	NA	#######	#######	51	129	NA	0-28			#	#	
HEPTACHLOR	0.05	ND	0.263	ND	NA	NA	NA	52.6	34	111	NA	#######	#######	40	139	NA	0-37			#	#	
DELTA-BHC	0.05	ND	0.428	ND	NA	NA	NA	85.6	19	140	NA	#######	#######	56	138	NA	0-78			#	#	
ALDRIN	0.05	ND	0.263	ND	NA	NA	NA	52.6	42	122	NA	#######	#######	28	143	NA	0-38			#	#	
HEPTACHLOR EPOXIDE	0.05	ND	0.363	ND	NA	NA	NA	72.6	37	142	NA	#######	#######	51	135	NA	0-40			#	#	
GAMMA-CHLORDANE	0.05	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40					
ALPHA-CHLORDANE	0.05	ND	NA	ND	NA	NA	NA	NA	54	119	NA	NA	NA	45	115	NA	0-17					
ENDOSULFAN I	0.05	ND	0.282	ND	NA	NA	NA	56.4	45	153	NA	#######	#######	37	123	NA	0-22			#	#	
4,4-DDE	0.10	ND	0.426	ND	NA	NA	NA	85.2	30	145	NA	#######	#######	64	152	NA	0-23			#	#	
DIELDRIN	0.10	ND	0.428	ND	NA	NA	NA	85.6	36	146	NA	#######	#######	23	171	NA	0-20			#	#	
ENDRIN	0.10	ND	0.392	ND	NA	NA	NA	78.4	30	147	NA	#######	#######	56	154	NA	0-28			#	#	
4,4-DDD	0.10	ND	0.438	ND	NA	NA	NA	87.6	31	141	NA	#######	#######	56	179	NA	0-30			#	#	
ENDOSULFAN II	0.10	ND	0.352	ND	NA	NA	NA	70.4	D	202	NA	#######	#######	21	117	NA	0-18			#	#	
4,4-DDT	0.10	ND	0.445	ND	NA	NA	NA	89.0	25	160	NA	#######	#######	42	168	NA	0-22			#	#	
ENDRIN ALDEHYDE	0.10	ND	0.263	ND	NA	NA	NA	52.6	NA	NA	NA	#######	#######	21	115	NA	0-40			#	#	
ENDOSULFAN SULFATE	0.10	ND	0.337	ND	NA	NA	NA	67.4	26	144	NA	#######	#######	31	117	NA	0-30			#	#	
METHOXYCHLOR	0.10	ND	0.446	ND	NA	NA	NA	89	NA	NA	NA	#######	#######	28	196	NA	0-19			#	#	
ENDRIN KETONE	0.50	ND	0.406	ND	NA	NA	NA	81	NA	NA	NA	#######	#######	NA	NA	NA						
Tech-CHLORDANE	1.0	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40					
TOXAPHENE	1.0	ND	NA	ND	NA	NA	NA	NA	41	126	NA	NA	NA	40	125	NA	0-40					
SURROGATES																						
2,4,5,6-TETRACHLORO-M-XYLENE		8.48	7.82	NA	NA	NA	42.4	38.1	13	154	#######	#######	#######	13	154				#	#	#	
DECACHLOROBIPHENYL		17.5	17.1	NA	NA	NA	87.4	85.3	25	140	#######	#######	#######	25	140				#	#	#	

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 0.5 ug/L
SURROGATES spiked at 20 ug/L
NA = NOT APPLICABLE
DL = DILUTED OUT
ND = NOT DETECTED
RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE
MS=MATRIX SPIKE
MSD=MATRIX SPIKE DUPLICATE

KEMRON ENVIRONMENTAL SERVICES
MARIETTA, OH
QUALITY CONTROL SUMMARY / PCB WATERS , REAR

		INSTRUMENT : HP10			SMPL ID : NA
EXT'N DATE : 11/17/98		ANALYST : CDB	BLK FLNM : 052R0101		SMPL FLNM : NA
EXT'N BENCH SHT : V105P26		RUN DATE : 11/18/98	LCS FLNM : 053R0101		MS FLNM : NA
EXT'N WORK GRP : WG49406		ANAL WORK GRP : WG49492	LCS Dup FLNM : NA		MSD FLNM : NA

COMPOUND	RDL	CONCENTRATION , ug/L					% RECOVERY									PERCENT						
		Blank	LCS	Sample	MS	MSD	Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	RPD	RPD Advisory Limits	Blank	LCS	Sample	MS	MSD
AROCLOR 1016	0.5	ND	2.38	ND	NA	NA	NA	95.4	48	125	NA	NA	NA	48	125	NA	NA					
AROCLOR 1221	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1232	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1242	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1248	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1254	1.0	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0-40					
AROCLOR 1260	1.0	ND	2.44	ND	NA	NA	NA	97.5	59	122	NA	NA	NA	59	122	NA	NA					
SURROGATES																						
2,4,5,6-TETRACHLORO-M-XYLENE		0.086	0.110	NA	NA	NA	42.6	55.0	13	154	NA	NA	NA	13	154							
DECACHLOROBIPHENYL		0.174	0.185	NA	NA	NA	87.0	92.5	25	140	NA	NA	NA	25	140							

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at .25 ug/kg
SURROGATES spiked at .0200 ug/kg
NA = NOT APPLICABLE
DL = DILUTED OUT
ND = NOT DETECTED
RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE
MS=MATRIX SPIKE
MSD=MATRIX SPIKE DUPLICATE

ENVIRONMENTAL SERVICES

CHAIN-OF-CUSTODY RECORD

91684

Project Contact: Willy Burton

Turn Around Requirements:

Project No.: H19-007 Project Name: PACOE Patrick Town

Sampler (print): Klingbiel Signature: Erin Klingbiel

Sample I.D. No.	Comp*	Grab	Date	Time	Protocol CWA	Protocol SW846	NUMBER OF SAMPLES	Hold	SVOC	VOC	TSS	Pest/PCB	ADDITIONAL REQUIREMENTS
WEIR 1112	✓		11-12-98	1200			2				1	1	
WEIR 1112		✓	11-12-98	1200			2		1	1			
WEIR 1111	✓		11-11-98	1200			1				1		
WEIR 1110	✓		11-10-98	1200			1				1		
MIX 1112		✓	11-12-98	1230			4		1	1	1	1	
BG 1112		✓	11-12-98	1330			4		1	1	1	1	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Erin Klingbiel	11/12/98	1600					

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:
			Natalie Booth	11/13/98	0930	C/c Sealed Samples intact Cooler temp 3

*Homogenize all composite samples prior to analysis

White – Lab Yellow – Office Pink – Field

Work Order L9811250 Client VERSAR-MO #of Samples 6 Due Date 11/27 Page 1

Sample #	Analyses	Reason	Removed By ADT	Removed From	Moved To	Reliq. By	Ret'd by ADT	Ret'd To	Rec'd By	Reason
02,05,06	8270	Ext	DLK 11/13/98 8270	walk-in	S/AB	Blg	[illegible]	Dumpster	JKW	Disposal
1,3,4-6	TSS	Anal	DLK 11-16 98/1200	walk-in	Lab	Blg	DLK 11-16 98/1200	Archive	Blg	Archive
1,5,6	8081/PCB	Ext	DLK 11-17-98 0915	walk-in	S/AB	Blg	DLK 11/18/98 0800	Dumpster	JKW	Disposal
02,05,06	8260	Analysis	DLK 11/17/98 1300	V1	Voa	Blg	Blg 11/30/98 1500	Archive	JKW	Archive

KEMRON Environmental Services
109 Satellite Park
Marietta, Ohio 45750
Phone: (740) 373-4071

Versar, Inc.
9200 Rumsey Road
Columbia, MD 21045-1934

Attention: William Burton

PO Number:
Account Number: VERSAR-MD-331

Login #: L9811292
Report Date: 12/01/98
Work ID: 4119-007/PACOE PEDRICKTOWN
Date Received: 11/17/98

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9811292-01	WEIR 1116/COMP	L9811292-02	WEIR 1116/GRAB
L9811292-03	WEIR 1115	L9811292-04	WEIR 1114
L9811292-05	WEIR 1113	L9811292-06	MIX 1116
L9811292-07	BG 1116		

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

Certified By
Dennis S. Tepe

KEMRON
ENVIRONMENTAL SERVICES

Login #L9811292
December 1, 1998 12:36 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9811292-01
Client Sample ID: WEIR 1116/COMP
Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water
Collected: 11/16/98 0930

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	15		5.0	1	N/A	TJW	11/19/98	13:00	160.2

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811292-01
Client Sample ID: WEIR 1116/COMP
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/16/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/19/98
Analysis Date: 11/20/98 Time: 13:37

Instrument: HP10
Analyst: CDB
Lab File ID: 057R0101

Method: 8082/3550
Run ID: R56866
Batch : WG49595

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016.....	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221.....	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232.....	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242.....	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248.....	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254.....	ug/L		ND	1.0	1
11096-82-5	Aroclor-1260.....	ug/L		ND	1.0	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene.....	42.0	(13 - 154%)
Decachlorobiphenyl.....	34.7	(25 - 140%)

RL = Reporting Limit

KEMRON ENVI[illegible]MENTAL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811292-01
Client Sample ID: WEIR 1116/COMP
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A

Sample Weight: N/A
Extract Volume: N/A

Date Collected: 11/16/98

% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/19/98
Analysis Date: 11/24/98 Time:

Instrument: HP9
Analyst: ECL
Lab File ID: 1466

Method: 8081A\3510C
Run ID: R56837
Batch : WG49716

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L		ND	0.05	1
319-85-7	beta-BHC	ug/L		ND	0.05	1
319-86-8	delta-BHC	ug/L		ND	0.05	1
76-44-8	Heptachlor	ug/L		ND	0.05	1
309-00-2	Aldrin	ug/L		ND	0.05	1
1024-57-3	Heptachlor epoxide	ug/L		ND	0.05	1
959-98-8	Endosulfan I	ug/L		ND	0.05	1
60-57-1	Dieldrin	ug/L		ND	0.05	1
72-55-9	4,4'-DDE	ug/L		ND	0.10	1
72-20-8	Endrin	ug/L		ND	0.10	1
33213-65-9	Endosulfan II	ug/L		ND	0.10	1
72-54-8	4,4'-DDD	ug/L		ND	0.10	1
1031-07-8	Endosulfan sulfate	ug/L		ND	0.10	1
50-29-3	4,4'-DDT	ug/L		ND	0.10	1
72-43-5	Methoxychlor	ug/L		ND	0.10	1
53494-70-5	Endrin ketone	ug/L		ND	0.50	1
7421-93-4	Endrin aldehyde	ug/L		ND	0.10	1
5103-71-9	alpha Chlordane	ug/L		ND	0.10	1
5103-74-2	gamma Chlordane	ug/L		ND	0.05	1
8001-35-2	Toxaphene	ug/L		ND	0.05	1
	gamma-BHC (Lindane)	ug/L		ND	1.0	1
				ND	0.05	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	40.3	(13 - 154%)
Decachlorobiphenyl	36.4	(25 - 140%)

RL = Reporting Limit

Login #L9811292
December 1, 1998 12:36 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811292-02
Client Sample ID: WEIR 1116/GRAB
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/16/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/20/98 Time: 15:52

Instrument: HPMS5
Analyst: MDC
Lab File ID: 8690.D,8697.D,8691.D,8695.D,8692.D,8693.D

Method: 8270C\3510C
Run ID: R56578

Bat

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L		ND	10	2
111-44-4	Bis(2-Chloroethyl)ether	ug/L		ND	10	2
95-57-8	2-Chlorophenol	ug/L		ND	10	2
541-73-1	1,3-Dichlorobenzene	ug/L		ND	10	2
106-46-7	1,4-Dichlorobenzene	ug/L		ND	10	2
95-50-1	1,2-Dichlorobenzene	ug/L		ND	10	2
95-48-7	2-Methylphenol	ug/L		ND	10	2
108-60-1	bis(2-Chloroisopropyl)ether	ug/L		ND	10	2
106-44-5	4-Methylphenol	ug/L		ND	10	2
621-64-7	N-Nitroso-di-n-propylamine	ug/L		ND	10	2
67-72-1	Hexachloroethane	ug/L		ND	10	2
98-95-3	Nitrobenzene	ug/L		ND	10	2
78-59-1	Isophorone	ug/L		ND	10	2
88-75-5	2-Nitrophenol	ug/L		ND	10	2
105-67-9	2,4-Dimethylphenol	ug/L		ND	10	2
111-91-1	Bis(2-Chloroethoxy)Methane	ug/L		ND	10	2
120-83-2	2,4-Dichlorophenol	ug/L		ND	10	2
120-82-1	1,2,4-Trichlorobenzene	ug/L		ND	10	2
91-20-3	Naphthalene	ug/L		ND	10	2
106-47-8	4-Chloroaniline	ug/L		ND	10	2
87-68-3	Hexachlorobutadiene	ug/L		ND	10	2
59-50-7	4-Chloro-3-methylphenol	ug/L		ND	10	2
91-57-6	2-Methylnaphthalene	ug/L		ND	10	2
77-47-4	Hexachlorocyclopentadiene	ug/L		ND	10	2
88-06-2	2,4,6-Trichlorophenol	ug/L		ND	10	2
95-95-4	2,4,5-Trichlorophenol	ug/L		ND	50	2
91-58-7	2-Chloronaphthalene	ug/L		ND	10	2
88-74-4	2-Nitroaniline	ug/L		ND	50	2
131-11-3	Dimethylphthalate	ug/L		ND	10	2
208-96-8	Acenaphthylene	ug/L		ND	10	2
606-20-2	2,6-Dinitrotoluene	ug/L		ND	10	2
99-09-2	3-Nitroaniline	ug/L		ND	50	2
83-32-9	Acenaphthene	ug/L		ND	10	2
51-28-5	2,4-Dinitrophenol	ug/L		ND	50	2
100-02-7	4-Nitrophenol	ug/L		ND	50	2
132-64-9	Dibenzofuran	ug/L		ND	10	2
121-14-2	2,4-Dinitrotoluene	ug/L		ND	10	2
84-66-2	Diethylphthalate	ug/L		ND	10	2
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L		ND	10	2

RL = Reporting Limit

KEMRON ENVI[illegible]MENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811292-02
Client Sample ID: WEIR 1116/GRAB
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/20/98 Time: 15:52

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/16/98

Instrument: HPMS5
Analyst: MDC
Lab File ID: 8690.D,8697.D,8691.D,8695.D,8692.D,8693.D

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8270C\3510C
Run ID: R56578

Ba

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L		ND	10	2
100-01-6	4-Nitroaniline	ug/L		ND	50	2
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	50	2
86-30-6	N-Nitrosodiphenylamine	ug/L		ND	10	2
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	10	2
118-74-1	Hexachlorobenzene	ug/L		ND	10	2
87-86-5	Pentachlorophenol	ug/L		ND	50	2
85-01-8	Phenanthrene	ug/L		ND	10	2
120-12-7	Anthracene	ug/L		ND	10	2
86-74-8	Carbazole	ug/L		ND	10	2
84-74-2	Di-N-Butylphthalate	ug/L		ND	10	2
206-44-0	Fluoranthene	ug/L		ND	10	2
129-00-0	Pyrene	ug/L		ND	10	2
85-68-7	Butylbenzylphthalate	ug/L		ND	10	2
91-94-1	3,3'-Dichlorobenzidine	ug/L		ND	20	2
56-55-3	Benzo(a)anthracene	ug/L		ND	10	2
218-01-9	Chrysene	ug/L		ND	10	2
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	10	2
117-84-0	Di-n-octylphthalate	ug/L		ND	10	2
205-99-2	Benzo(b)fluoranthene	ug/L		ND	10	2
207-08-9	Benzo(k)fluoranthene	ug/L		ND	10	2
50-32-8	Benzo(a)pyrene	ug/L		ND	10	2
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L		ND	10	2
53-70-3	Dibenzo(a,h)Anthracene	ug/L		ND	10	2
191-24-2	Benzo(g,h,i)Perylene	ug/L		ND	10	2

SURROGATES- In Percent Recovery:

2-Fluorophenol	39.8	(21 - 100%)
Phenol-d5	24.5	(10 - 94%)
Nitrobenzene-d5	57.1	(35 - 114%)
2-Fluorobiphenyl	64.2	(43 - 116%)
2,4,6-Tribromophenol	117	(10 - 123%)
p-Terphenyl-d14	78.6	(33 - 141%)

RL = Reporting Limit

Login #L9811292
December 1, 1998 12:36 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811292-02
Client Sample ID: WEIR 1116/GRAB
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/16/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/23/98 Time: 16:40

Instrument: HPMS1
Analyst: SLT
Lab File ID: 1VR29868

Method: 8260B
Run ID: R56759
Batch : WG49687

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/L		ND	10	1
74-83-9	Bromomethane	ug/L		ND	10	1
75-01-4	Vinyl chloride	ug/L		ND	10	1
75-00-3	Chloroethane	ug/L		ND	10	1
75-09-2	Methylene chloride	ug/L		ND	5.0	1
67-64-1	Acetone	ug/L	12		10	1
75-15-0	Carbon disulfide	ug/L		ND	5.0	1
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1
75-34-3	1,1-Dichloroethane	ug/L		ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L		ND	5.0	1
67-66-3	Chloroform	ug/L		ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	1
78-93-3	2-Butanone	ug/L		ND	10	1
71-55-6	1,1,1-Trichloroethane	ug/L		ND	5.0	1
56-23-5	Carbon tetrachloride	ug/L		ND	5.0	1
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	1
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	1
79-01-6	Trichloroethene	ug/L		ND	5.0	1
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1
71-43-2	Benzene	ug/L		ND	5.0	1
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	1
75-25-2	Bromoform	ug/L		ND	5.0	1
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	1
591-78-6	2-Hexanone	ug/L		ND	10	1
127-18-4	Tetrachloroethene	ug/L		ND	5.0	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0	1
108-88-3	Toluene	ug/L		ND	5.0	1
108-90-7	Chlorobenzene	ug/L		ND	5.0	1
100-41-4	Ethyl benzene	ug/L		ND	5.0	1
100-42-5	Styrene	ug/L		ND	5.0	1
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1

SURROGATES- In Percent Recovery:

Dibromofluoromethane	105	(86 - 118%)
Toluene-d8	108	(88 - 110%)
p-Bromofluorobenzene	102	(86 - 115%)
1,2-Dichloroethane-d4	111	(80 - 120%)

RL = Reporting Limit

Lab Sample ID: L9811292-03
Client Sample ID: WEIR 1115
Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water
Collected: 11/15/98 0930

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	14		5.0	1	N/A	TJW	11/19/98	13:00	160.2

Lab Sample ID: L9811292-04
Client Sample ID: WEIR 1114
Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water
Collected: 11/14/98 0930

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	16		5.0	1	N/A	TJW	11/19/98	13:00	160.2

Lab Sample ID: L9811292-05
Client Sample ID: WEIR 1113
Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water
Collected: 11/13/98 0930

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	18		5.0	1	N/A	TJW	11/19/98	13:00	160.2

Lab Sample ID: L9811292-06
Client Sample ID: MIX 1116
Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water
Collected: 11/16/98 1000

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	19		5.0	1	N/A	TJW	11/19/98	13:00	160.2

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811292-06
Client Sample ID: MIX 1116
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/19/98
Analysis Date: 11/20/98 Time: 14:13

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/16/98
Instrument: HP10
Analyst: CDB
Lab File ID: 058R0101

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A
Method: 8082/3550
Run ID: R56866
Batch : WG49595

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	1.0	1
11096-82-5	Aroclor-1260	ug/L		ND	1.0	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	49.1	(13 - 154%)
Decachlorobiphenyl	47.9	(25 - 140%)

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811292-06
Client Sample ID: MIX 1116
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/19/98
Analysis Date: 11/24/98 Time:

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/16/98
Instrument: HP9
Analyst: ECL
Lab File ID: 1467

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A
Method: 8081A\3510C
Run ID: R56837
Batch : WG49716

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L		ND	0.05	1
319-85-7	beta-BHC	ug/L		ND	0.05	1
319-86-8	delta-BHC	ug/L		ND	0.05	1
76-44-8	Heptachlor	ug/L		ND	0.05	1
309-00-2	Aldrin	ug/L		ND	0.05	1
1024-57-3	Heptachlor epoxide	ug/L		ND	0.05	1
959-98-8	Endosulfan I	ug/L		ND	0.05	1

RL = Reporting Limit

KEMRON ENVI[illegible]ENTAL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811292-06
Client Sample ID: MIX 1116
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/19/98
Analysis Date: 11/24/98 Time:

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/16/98

Instrument: HP9
Analyst: ECL
Lab File ID: 1467

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8081A\3510C
Run ID: R56837
Batch : WG49716

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
60-57-1	Dieldrin	ug/L		ND	0.10	1
72-55-9	4,4'-DDE	ug/L		ND	0.10	1
72-20-8	Endrin	ug/L		ND	0.10	1
33213-65-9	Endosulfan II	ug/L		ND	0.10	1
72-54-8	4,4'-DDD	ug/L		ND	0.10	1
1031-07-8	Endosulfan sulfate	ug/L		ND	0.10	1
50-29-3	4,4'-DDT	ug/L		ND	0.10	1
72-43-5	Methoxychlor	ug/L		ND	0.10	1
53494-70-5	Endrin ketone	ug/L		ND	0.50	1
7421-93-4	Endrin aldehyde	ug/L		ND	0.10	1
5103-71-9	alpha Chlordane	ug/L		ND	0.10	1
5103-74-2	gamma Chlordane	ug/L		ND	0.05	1
8001-35-2	Toxaphene	ug/L		ND	0.05	1
	gamma-BHC (Lindane)	ug/L		ND	1.0	1
					0.05	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	47.7	(13 - 154%)
Decachlorobiphenyl	50.2	(25 - 140%)

RL = Reporting Limit

Login #L9811292
December 1, 1998 12:36 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811292-06
Client Sample ID: MIX 1116
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/20/98 Time: 16:32

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/16/98

Instrument: HPMS5
Analyst: MDC
Lab File ID: 8690.D,8697.D,8691.D,8695.D,8692.D,8693.D

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8270C\3510C
Run ID: R56578

Bat

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L		ND	10	2
111-44-4	Bis(2-Chloroethyl)ether	ug/L		ND	10	2
95-57-8	2-Chlorophenol	ug/L		ND	10	2
541-73-1	1,3-Dichlorobenzene	ug/L		ND	10	2
106-46-7	1,4-Dichlorobenzene	ug/L		ND	10	2
95-50-1	1,2-Dichlorobenzene	ug/L		ND	10	2
95-48-7	2-Methylphenol	ug/L		ND	10	2
108-60-1	bis(2-Chloroisopropyl)ether	ug/L		ND	10	2
106-44-5	4-Methylphenol	ug/L		ND	10	2
621-64-7	N-Nitroso-di-n-propylamine	ug/L		ND	10	2
67-72-1	Hexachloroethane	ug/L		ND	10	2
98-95-3	Nitrobenzene	ug/L		ND	10	2
78-59-1	Isophorone	ug/L		ND	10	2
88-75-5	2-Nitrophenol	ug/L		ND	10	2
105-67-9	2,4-Dimethylphenol	ug/L		ND	10	2
111-91-1	Bis(2-Chloroethoxy)Methane	ug/L		ND	10	2
120-83-2	2,4-Dichlorophenol	ug/L		ND	10	2
120-82-1	1,2,4-Trichlorobenzene	ug/L		ND	10	2
91-20-3	Naphthalene	ug/L		ND	10	2
106-47-8	4-Chloroaniline	ug/L		ND	10	2
87-68-3	Hexachlorobutadiene	ug/L		ND	10	2
59-50-7	4-Chloro-3-methylphenol	ug/L		ND	10	2
91-57-6	2-Methylnaphthalene	ug/L		ND	10	2
77-47-4	Hexachlorocyclopentadiene	ug/L		ND	10	2
88-06-2	2,4,6-Trichlorophenol	ug/L		ND	10	2
95-95-4	2,4,5-Trichlorophenol	ug/L		ND	50	2
91-58-7	2-Chloronaphthalene	ug/L		ND	10	2
88-74-4	2-Nitroaniline	ug/L		ND	50	2
131-11-3	Dimethylphthalate	ug/L		ND	10	2
208-96-8	Acenaphthylene	ug/L		ND	10	2
606-20-2	2,6-Dinitrotoluene	ug/L		ND	10	2
99-09-2	3-Nitroaniline	ug/L		ND	50	2
83-32-9	Acenaphthene	ug/L		ND	10	2
51-28-5	2,4-Dinitrophenol	ug/L		ND	50	2
100-02-7	4-Nitrophenol	ug/L		ND	50	2
132-64-9	Dibenzofuran	ug/L		ND	10	2
121-14-2	2,4-Dinitrotoluene	ug/L		ND	10	2
84-66-2	Diethylphthalate	ug/L		ND	10	2
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L		ND	10	2

RL = Reporting Limit

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811292-06
Client Sample ID: MIX 1116
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/20/98 Time: 16:32

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/16/98

Instrument: HPMS5
Analyst: MDC
Lab File ID: 8690.D,8697.D,8691.D,8695.D,8692.D,8693.D

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8270C\3510C
Run ID: R56578

Ba

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L		ND	10	2
100-01-6	4-Nitroaniline	ug/L		ND	50	2
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	50	2
86-30-6	N-Nitrosodiphenylamine	ug/L		ND	10	2
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	10	2
118-74-1	Hexachlorobenzene	ug/L		ND	10	2
87-86-5	Pentachlorophenol	ug/L		ND	50	2
85-01-8	Phenanthrene	ug/L		ND	10	2
120-12-7	Anthracene	ug/L		ND	10	2
86-74-8	Carbazole	ug/L		ND	10	2
84-74-2	Di-N-Butylphthalate	ug/L		ND	10	2
206-44-0	Fluoranthene	ug/L		ND	10	2
129-00-0	Pyrene	ug/L		ND	10	2
85-68-7	Butylbenzylphthalate	ug/L		ND	10	2
91-94-1	3,3'-Dichlorobenzidine	ug/L		ND	20	2
56-55-3	Benzo(a)anthracene	ug/L		ND	10	2
218-01-9	Chrysene	ug/L		ND	10	2
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	10	2
117-84-0	Di-n-octylphthalate	ug/L		ND	10	2
205-99-2	Benzo(b)fluoranthene	ug/L		ND	10	2
207-08-9	Benzo(k)fluoranthene	ug/L		ND	10	2
50-32-8	Benzo(a)pyrene	ug/L		ND	10	2
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L		ND	10	2
53-70-3	Dibenzo(a,h)Anthracene	ug/L		ND	10	2
191-24-2	Benzo(g,h,i)Perylene	ug/L		ND	10	2

SURROGATES- In Percent Recovery:

2-Fluorophenol	41.5	(21 - 100%)
Phenol-d5	24.5	(10 - 94%)
Nitrobenzene-d5	62.3	(35 - 114%)
2-Fluorobiphenyl	67.9	(43 - 116%)
2,4,6-Tribromophenol	109	(10 - 123%)
p-Terphenyl-d14	93.9	(33 - 141%)

RL = Reporting Limit

Login #L9811292
December 1, 1998 12:36 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811292-06
Client Sample ID: MIX 1116
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/16/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/23/98 Time: 17:22

Instrument: HPMS1
Analyst: SLT
Lab File ID: 1VR29869

Method: 8260B
Run ID: R56759
Batch : WG49687

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/L		ND	10	1
74-83-9	Bromomethane	ug/L		ND	10	1
75-01-4	Vinyl chloride	ug/L		ND	10	1
75-00-3	Chloroethane	ug/L		ND	10	1
75-09-2	Methylene chloride	ug/L		ND	5.0	1
67-64-1	Acetone	ug/L	14		10	1
75-15-0	Carbon disulfide	ug/L		ND	5.0	1
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1
75-34-3	1,1-Dichloroethane	ug/L		ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L		ND	5.0	1
67-66-3	Chloroform	ug/L		ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	1
78-93-3	2-Butanone	ug/L		ND	10	1
71-55-6	1,1,1-Trichloroethane	ug/L		ND	5.0	1
56-23-5	Carbon tetrachloride	ug/L		ND	5.0	1
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	1
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	1
79-01-6	Trichloroethene	ug/L		ND	5.0	1
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1
71-43-2	Benzene	ug/L		ND	5.0	1
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	1
75-25-2	Bromoform	ug/L		ND	5.0	1
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	1
591-78-6	2-Hexanone	ug/L		ND	10	1
127-18-4	Tetrachloroethene	ug/L		ND	5.0	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0	1
108-88-3	Toluene	ug/L		ND	5.0	1
108-90-7	Chlorobenzene	ug/L		ND	5.0	1
100-41-4	Ethyl benzene	ug/L		ND	5.0	1
100-42-5	Styrene	ug/L		ND	5.0	1
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1

SURROGATES- In Percent Recovery:

Dibromofluoromethane	106	(86 - 118%)
Toluene-d8	107	(88 - 110%)
p-Bromofluorobenzene	102	(86 - 115%)
1,2-Dichloroethane-d4	111	(80 - 120%)

RL = Reporting Limit

Order #: 98-11-292
December 1, 1998 12:36 pm

KEMRON ENVIRONMENTAL SERVICES
WORK GROUPS

Work Group	Run ID	Sample	Dil Type	Matrix	Product	Method	Date Collected	Department
WG49510	R56578	L9811292-02		Water	TCL Semivolatiles	8270C\3510C	16-NOV-1998	Extraction
WG49510	R56578	L9811292-06		Water	TCL Semivolatiles	8270C\3510C	16-NOV-1998	Extraction
WG49575	R56837	L9811292-01		Water	Organochlorine Pesticides	8081A\3510C	16-NOV-1998	Extraction
WG49575	R56837	L9811292-06		Water	Organochlorine Pesticides	8081A\3510C	16-NOV-1998	Extraction
WG49576	R56866	L9811292-01		Water	PCB's (Water)	8082/3550	16-NOV-1998	Extraction
WG49576	R56866	L9811292-06		Water	PCB's (Water)	8082/3550	16-NOV-1998	Extraction
WG49595	R56866	L9811292-01		Water	PCB's (Water)	8082/3550	16-NOV-1998	Semivolatile - GC
WG49595	R56866	L9811292-06		Water	PCB's (Water)	8082/3550	16-NOV-1998	Semivolatile - GC
WG49605	R56624	L9811292-01		Water	Total Suspended Solids	160.2	16-NOV-1998	Conventionals
WG49605	R56624	L9811292-03		Water	Total Suspended Solids	160.2	15-NOV-1998	Conventionals
WG49605	R56624	L9811292-04		Water	Total Suspended Solids	160.2	14-NOV-1998	Conventionals
WG49605	R56624	L9811292-05		Water	Total Suspended Solids	160.2	13-NOV-1998	Conventionals
WG49605	R56624	L9811292-06		Water	Total Suspended Solids	160.2	16-NOV-1998	Conventionals
WG49665	R56578	L9811292-02		Water	TCL Semivolatiles	8270C\3510C	16-NOV-1998	Semivolatile - GC/MS
WG49665	R56578	L9811292-06		Water	TCL Semivolatiles	8270C\3510C	16-NOV-1998	Semivolatile - GC/MS
WG49687	R56759	L9811292-02		Water	TCL Volatiles	8260B	16-NOV-1998	Volatile - GC/MS
WG49687	R56759	L9811292-06		Water	TCL Volatiles	8260B	16-NOV-1998	Volatile - GC/MS
WG49716	R56837	L9811292-01		Water	Organochlorine Pesticides	8081A\3510C	16-NOV-1998	Semivolatile - GC
WG49716	R56837	L9811292-06		Water	Organochlorine Pesticides	8081A\3510C	16-NOV-1998	Semivolatile - GC

KEMRON ANALYST LIST

Ohio Valley Laboratory

10/28/98

ALC -- Ann L. Clark
BAD -- Becky A. Diehl
CEB -- Chad E. Barnes
CDB -- Christy D. Burton
CMS -- Crystal M. Stevens
CRC -- Carla R. Cochran
DIH -- Deanna I. Hesson
DKM -- Dewey K. Miller
DLN -- Deanna L. Norton
DLP -- Dorothy L. Payne
ECL -- Eric C. Lawson
FEH -- Fay E. Harmon
HV -- Hema Vilasagar
JLH -- Janice L. Holland
JWR -- John W. Richards
JYH -- Ji Y. Hu
KHA -- Kim H. Archer
KMS -- Kevin M. Stutler
KRA -- Kathy R. Albertson
MDA -- Mike D. Albertson
MDC -- Michael D. Cochran
MES -- Mary E. Schilling
MLS -- Michael L. Schimmel
MMB -- Maren M. Beery
RDC -- Rebecca D. Cutlip
RDS -- Rebecca D. Sutton
REF -- Ron E. Fertile
REK -- Robert E. Kyer
RSS -- Regina S. Simmons
RWC -- Rodney W. Campbell
SJK -- Sindy J. Kinney
SJM -- Shawn J. Marshall
SLP -- Sheri L. Pfalzgraf
SLT -- Stephanie L. Tepe
SMW -- Shauna M. Welch
SPL -- Steve P. Learn
TJW -- Thomas J. Ware
TRS -- Todd R. Stack
VC -- Vicki Collier
VMN -- Vincent M. Nedeff

KEMRON Environmental Services, Inc.
LIST OF VALID QUALIFIERS (qual)
March 9, 1998

Qualifier	Description
(A)	See the report narrative
(B)	See the report narrative
(C)	See the report narrative
+	Correlation coefficient for the MSA is less than 0.995
<	Less than
>	Greater than
B	Present in the method blank
C	Confirmed by GC/MS
*	Surrogate or spike compound out of range
CG	Confluent growth
D	The analyte was quantified at a secondary dilution factor
DL	Surrogate or spike was diluted out
E	Estimated concentration due to sample matrix interference
F	Present below nominal reporting limit (AFCEE only)
FL	Free liquid
I	Semiquantitative result, out of instrument calibration range
J	Present below nominal reporting limit
L	Sample reporting limits elevated due to matrix interference
M	Duplicate injection precision not met

Qualifier	Description
N	Tentatively Identified Compound (TIC)
NA	Not applicable
ND	Not detected at or above the reporting limit (RL)
NF	Not found
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentration > 25% difference between the two GC columns
QNS	Quantity not sufficient to perform analysis
R	Analyte exceeds regulatory limit
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TNTC	Too numerous to count
U	Analyzed for but not detected
W	Post-digestion spike for furnace AA out of control limits
X	Can not be resolved from isomer. See below.

Special Notes for Organic Analytes

1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

INORGANIC QA/QC

KEMRON
ENVIRONMENTAL SERVICES

KD[redacted]N ENVIRONMENTAL SERVICES
O[redacted]ALLEY LABORATORY
QUALITY CONTROL SUMMARY

WORKGROUP: wg49605
METHOD: 160.2
MATRIX: Water
UNITS: mg/L

RUN DATE: 11/19/98
ANALYST: ljw
DUPLICATE: 11-315-04

ANALYTE	RDL	Blank	T-LCS	LCS	REP1	REP2	SAMPLE RESULT	T-MS	MS	PERCENT RECOVERY LCS	LCS LCL	LCS UCL	MS	MS LCL	MS UCL	PERCENT RPD REP RPD	RPD UCL
TSS	5.00	ND	50.00	48.00	9900.00	10100.00	NR	NR	NR	96.0	81.0	114.5	NR	NR	NR	2.00	20.00

NOTES & DEFINITIONS :

RDL = REPORTING DETECTION LIMIT
DL = DILUTED OUT
NA = NOT APPLICABLE
ND = NOT DETECTED
NR = NOT REQUIRED

LCS = LABORATORY CONTROL SAMPLE
T- LCS = TRUE VALUE OF LCS
REP1 = UNSPIKED SAMPLE REPLICATE 1
REP2 = UNSPIKED SAMPLE REPLICATE 2
SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX.
T-MS = TRUE VALUE OF MATRIX SPIKE
MS = MATRIX SPIKE
LCL = LOWER CONTROL LIMIT
UCL = UPPER CONTROL LIMIT

REP RPD = RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES

ORGANIC QA/QC

KEM[illegible]N ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49687	Run Date:	11/23/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_1	SMPL Num:	11-303-09	SMPL DF:	1
Matrix:	Water	BLK FLNM:	1BK29858	SMPL FLNM:	1AM29861	MS DF:	1
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	1AM29862	MSD DF:	1
		LCS FLNM:	1QC29859	MSD FLNM:	1AM29863		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
dichlorodifluoromethane	10.0	ND	ND	12.9	NA	20.0	ND	12.2	12.5	20.0	64.5	NA	38.0	148.0	61.0	62.5	60.0	140.0	2.4	20.0
chloromethane	10.0	ND	ND	15.5	NA	20.0	ND	14.6	14.5	20.0	77.5	NA	56.0	132.0	73.0	72.5	D	273.0	0.7	20.0
vinyl chloride	10.0	ND	ND	17.3	NA	20.0	ND	16.3	16.7	20.0	86.5	NA	68.0	125.0	81.5	83.5	D	251.0	2.4	20.0
bromomethane	10.0	ND	ND	17.1	NA	20.0	ND	17.3	17.8	20.0	85.5	NA	55.0	138.0	86.5	89.0	D	242.0	2.8	20.0
chloroethane	10.0	ND	ND	17.7	NA	20.0	ND	17.1	17.1	20.0	88.5	NA	57.0	128.0	85.5	85.5	14.0	230.0	0.0	20.0
trichlorofluoromethane	10.0	ND	ND	15.5	NA	20.0	ND	15.1	15.8	20.0	77.5	NA	70.0	127.0	75.5	79.0	17.0	181.0	4.5	20.0
freon 113	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	70.0	130.0	NA	20.0
acetone	100.0	ND	ND	18.0	NA	20.0	ND	20.6	20.5	20.0	90.0	NA	44.0	114.0	103.0	102.5	70.0	130.0	0.5	20.0
1,1-dichloroethene	5.0	ND	ND	20.1	NA	20.0	ND	19.5	20.1	20.0	100.5	NA	69.0	144.0	97.5	100.5	D	234.0	3.0	20.0
iodomethane	NTC	ND	ND	15.5	NA	20.0	ND	15.9	12.9	20.0	77.5	NA	NA	NA	79.5	64.5	70.0	130.0	20.8	20.0
methylene chloride	5.0	ND	ND	25.1	NA	20.0	ND	23.8	21.7	20.0	125.5	NA	71.0	128.0	119.0	108.5	D	221.0	9.2	20.0
carbon disulfide	5.0	ND	ND	20.2	NA	20.0	ND	20.5	19.3	20.0	101.0	NA	67.0	136.0	102.5	96.5	70.0	130.0	6.0	20.0
acrylonitrile	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	70.0	130.0	NA	20.0
trans-1,2-dichloroethene	5.0	ND	ND	21.6	NA	20.0	ND	21.3	21.6	20.0	108.0	NA	85.0	133.0	106.5	108.0	54.0	156.0	1.4	20.0
vinyl acetate	10.0	ND	ND	20.5	NA	20.0	ND	21.1	20.4	20.0	102.5	NA	9.0	236.0	105.5	102.0	9.0	236.0	3.4	20.0
1,1-dichloroethane	5.0	ND	ND	21.2	NA	20.0	ND	20.8	21.4	20.0	106.0	NA	82.0	124.0	104.0	107.0	59.0	155.0	2.8	20.0
2-butanone	100.0	ND	ND	19.4	NA	20.0	ND	22.0	21.4	20.0	97.0	NA	43.0	140.0	110.0	107.0	70.0	130.0	2.8	20.0
2,2-dichloropropane	5.0	ND	ND	19.7	NA	20.0	ND	19.0	20.4	20.0	98.5	NA	77.0	126.0	95.0	102.0	60.0	140.0	7.1	20.0
cis-1,2-dichloroethene	5.0	ND	ND	19.5	NA	20.0	ND	18.7	19.3	20.0	97.5	NA	69.0	130.0	93.5	96.5	60.0	140.0	3.2	20.0
chloroform	5.0	ND	ND	20.5	NA	20.0	ND	19.9	20.6	20.0	102.5	NA	83.0	121.0	99.5	103.0	51.0	138.0	3.5	20.0

Notes and Definitions:

RDL = Reporting Detection Limit
BLK = Method Blank
BLK2 = Second Method Blank
LCS = Laboratory Control Sample
LCS2 = Second Laboratory Control Sample
SMPL = Sample Results
MS/MSD = Matrix Spike / Matrix Spike Duplicate
LCL = Lower Control Limit
UCL = Upper Control Limit
RPD = Relative Percent Difference

ND = Not Detected
NA = Not Applicable

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49687	Run Date:	11/23/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_1	SMPL Num:	11-303-09	SMPL DF:	1
Matrix:	Water	BLK FLNM:	1BK29858	SMPL FLNM:	1AM29861	MS DF:	1
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	1AM29862	MSD DF:	1
		LCS FLNM:	1QC29859	MSD FLNM:	1AM29863		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
bromochloromethane	5.0	ND	ND	20.1	NA	20.0	ND	18.8	18.7	20.0	100.5	NA	85.0	118.0	94.0	93.5	60.0	140.0	0.5	20.0
1,1,1-trichloroethane	5.0	ND	ND	19.6	NA	20.0	ND	19.2	19.9	20.0	98.0	NA	74.0	125.0	96.0	99.5	52.0	162.0	3.6	20.0
1,1-dichloropropene	5.0	ND	ND	21.9	NA	20.0	ND	21.5	22.8	20.0	109.5	NA	85.0	126.0	107.5	114.0	60.0	140.0	5.9	20.0
carbon tetrachloride	5.0	ND	ND	19.5	NA	20.0	ND	18.8	19.9	20.0	97.5	NA	73.0	129.0	94.0	99.5	70.0	140.0	5.7	20.0
1,2-dichloroethane	5.0	ND	ND	20.4	NA	20.0	ND	19.8	20.2	20.0	102.0	NA	76.0	123.0	99.0	101.0	49.0	155.0	2.0	20.0
benzene	5.0	ND	ND	20.0	NA	20.0	ND	19.6	20.6	20.0	100.0	NA	86.0	118.0	98.0	103.0	37.0	151.0	5.0	20.0
trichloroethene	5.0	ND	ND	19.3	NA	20.0	ND	18.3	19.7	20.0	96.5	NA	82.0	120.0	91.5	98.5	71.0	157.0	7.4	20.0
1,2-dichloropropane	5.0	ND	ND	20.2	NA	20.0	ND	19.9	20.4	20.0	101.0	NA	74.0	126.0	99.5	102.0	D	210.0	2.5	20.0
bromodichloromethane	5.0	ND	ND	19.9	NA	20.0	ND	18.8	19.7	20.0	99.5	NA	74.0	126.0	94.0	98.5	35.0	155.0	4.7	20.0
dibromomethane	5.0	ND	ND	20.1	NA	20.0	ND	19.2	20.0	20.0	100.5	NA	78.0	125.0	96.0	100.0	60.0	140.0	4.1	20.0
2-chloroethylvinyl-ether	10.0	ND	ND	17.5	NA	20.0	ND	ND	ND	20.0	87.5	NA	50.0	151.0	NA	NA	70.0	130.0	ND	20.0
4-methyl-2-pentanone	10.0	ND	ND	19.1	NA	20.0	ND	18.2	19.0	20.0	95.5	NA	79.0	127.0	91.0	95.0	70.0	130.0	4.3	20.0
cis-1,3-dichloropropene	5.0	ND	ND	20.0	NA	20.0	ND	19.2	20.0	20.0	100.0	NA	77.0	123.0	96.0	100.0	D	227.0	4.1	20.0
toluene	5.0	ND	ND	19.8	NA	20.0	ND	19.5	20.8	20.0	99.0	NA	83.0	119.0	97.5	104.0	47.0	150.0	6.5	20.0
trans-1,3-dichloropropene	5.0	ND	ND	19.6	NA	20.0	ND	18.9	19.8	20.0	98.0	NA	74.0	124.0	94.5	99.0	17.0	183.0	4.7	20.0
1,1,2-trichloroethane	5.0	ND	ND	19.8	NA	20.0	ND	18.9	20.3	20.0	99.0	NA	72.0	119.0	94.5	101.5	52.0	150.0	7.1	20.0
2-hexanone	10.0	ND	ND	19.6	NA	20.0	ND	19.5	20.5	20.0	98.0	NA	55.0	114.0	97.5	102.5	70.0	130.0	5.0	20.0
1,3-dichloropropane	5.0	ND	ND	20.4	NA	20.0	ND	19.4	20.7	20.0	102.0	NA	73.0	122.0	97.0	103.5	60.0	140.0	6.5	20.0
tetrachloroethene	5.0	ND	ND	19.3	NA	20.0	ND	18.8	20.3	20.0	96.5	NA	82.0	120.0	94.0	101.5	64.0	148.0	7.7	20.0
dibromochloromethane	5.0	ND	ND	19.1	NA	20.0	ND	18.1	19.3	20.0	95.5	NA	72.0	121.0	90.5	96.5	53.0	149.0	6.4	20.0

Notes and Definitions:

RDL = Reporting Detection Limit
BLK = Method Blank
BLK2 = Second Method Blank
LCS = Laboratory Control Sample
LCS2 = Second Laboratory Control Sample
SMPL = Sample Results
MS/MSD = Matrix Spike / Matrix Spike Duplicate
LCL = Lower Control Limit
UCL = Upper Control Limit
RPD = Relative Percent Difference

ND = Not Detected
NA = Not Applicable

KE[illegible]ON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49687	Run Date:	11/23/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_1	SMPL Num:	11-303-09	SMPL DF:	1
Matrix:	Water	BLK FLNM:	1BK29858	SMPL FLNM:	1AM29861	MS DF:	1
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	1AM29862	MSD DF:	1
		LCS FLNM:	1QC29859	MSD FLNM:	1AM29863		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
1,2-dibromoethane	5.0	ND	ND	19.0	NA	20.0	ND	18.5	19.6	20.0	95.0	NA	75.0	121.0	92.5	98.0	60.0	140.0	5.8	20.0
chlorobenzene	5.0	ND	ND	20.1	NA	20.0	ND	19.8	20.8	20.0	100.5	NA	83.0	120.0	99.0	104.0	37.0	160.0	4.9	20.0
1,1,1,2-tetrachloroethane	5.0	ND	ND	19.0	NA	20.0	ND	18.4	19.2	20.0	95.0	NA	79.0	118.0	92.0	96.0	60.0	140.0	4.3	20.0
ethylbenzene	5.0	ND	ND	20.0	NA	20.0	ND	19.9	20.9	20.0	100.0	NA	82.0	119.0	99.5	104.5	37.0	162.0	4.9	20.0
m+p-xylene	5.0	ND	ND	40.7	NA	40.0	ND	39.5	42.6	40.0	101.8	NA	81.0	121.0	98.8	106.5	60.0	140.0	7.6	20.0
o-xylene	5.0	ND	ND	20.2	NA	20.0	ND	19.4	20.7	20.0	101.0	NA	81.0	198.0	97.0	103.5	60.0	140.0	6.5	20.0
styrene	5.0	ND	ND	19.8	NA	20.0	ND	19.1	20.1	20.0	99.0	NA	81.0	118.0	95.5	100.5	60.0	140.0	5.1	20.0
bromoform	5.0	ND	ND	17.5	NA	20.0	ND	16.7	17.9	20.0	87.5	NA	68.0	129.0	83.5	89.5	45.0	169.0	6.9	20.0
isopropylbenzene	5.0	ND	ND	20.2	NA	20.0	ND	19.9	21.0	20.0	101.0	NA	81.0	121.0	99.5	105.0	60.0	140.0	5.4	20.0
1,1,2,2-tetrachloroethane	5.0	ND	ND	19.6	NA	20.0	ND	19.2	20.6	20.0	98.0	NA	61.0	137.0	96.0	103.0	46.0	157.0	7.0	20.0
1,2,3-trichloropropane	5.0	ND	ND	18.1	NA	20.0	ND	16.9	19.7	20.0	90.5	NA	72.0	130.0	84.5	98.5	60.0	140.0	15.3	20.0
trans-1,4-dichloro-2-butene	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	20.0
propyl-benzene	5.0	ND	ND	19.8	NA	20.0	ND	19.2	20.9	20.0	99.0	NA	69.0	135.0	96.0	104.5	60.0	140.0	8.5	20.0
bromobenzene	5.0	ND	ND	18.4	NA	20.0	ND	17.2	19.2	20.0	92.0	NA	86.0	118.0	86.0	96.0	60.0	140.0	11.0	20.0
1,3,5-trimethylbenzene	5.0	ND	ND	19.1	NA	20.0	ND	18.7	20.2	20.0	95.5	NA	83.0	121.0	93.5	101.0	60.0	140.0	7.7	20.0
2-chlorotoluene	5.0	ND	ND	18.9	NA	20.0	ND	17.7	20.4	20.0	94.5	NA	80.0	126.0	88.5	102.0	60.0	140.0	14.2	20.0
4-chlorotoluene	5.0	ND	ND	20.4	NA	20.0	ND	20.2	20.6	20.0	102.0	NA	80.0	125.0	101.0	103.0	60.0	140.0	2.0	20.0
tert-butyl-benzene	5.0	ND	ND	19.3	NA	20.0	ND	18.9	20.3	20.0	96.5	NA	79.0	114.0	94.5	101.5	60.0	140.0	7.1	20.0
1,2,4-trimethylbenzene	5.0	ND	ND	19.7	NA	20.0	ND	19.0	20.5	20.0	98.5	NA	84.0	121.0	95.0	102.5	60.0	140.0	7.6	20.0
sec-butyl-benzene	5.0	ND	ND	19.6	NA	20.0	ND	19.2	20.6	20.0	98.0	NA	81.0	122.0	96.0	103.0	60.0	140.0	7.0	20.0

Notes and Definitions:

RDL = Reporting Detection Limit

BLK = Method Blank

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RPD = Relative Percent Difference

ND = Not Detected

NA = Not Applicable

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49687	Run Date:	11/23/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_1	SMPL Num:	11-303-09	SMPL DF:	1
Matrix:	Water	BLK FLNM:	1BK29858	SMPL FLNM:	1AM29861	MS DF:	1
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	1AM29862	MSD DF:	1
		LCS FLNM:	1QC29859	MSD FLNM:	1AM29863		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
p-isopropyl-toluene	5.0	ND	ND	19.1	NA	20.0	ND	18.6	19.9	20.0	95.5	NA	80.0	119.0	93.0	99.5	60.0	140.0	6.8	20.0
1,3-dichlorobenzene	5.0	ND	ND	19.3	NA	20.0	ND	18.5	20.0	20.0	96.5	NA	85.0	119.0	92.5	100.0	60.0	140.0	7.8	20.0
1,4-dichlorobenzene	5.0	ND	ND	19.3	NA	20.0	ND	18.3	19.7	20.0	96.5	NA	82.0	122.0	91.5	98.5	18.0	190.0	7.4	20.0
n-butyl-benzene	5.0	ND	ND	20.2	NA	20.0	ND	20.0	21.1	20.0	101.0	NA	80.0	125.0	100.0	105.5	60.0	140.0	5.4	20.0
1,2-dichlorobenzene	5.0	ND	ND	19.6	NA	20.0	ND	18.6	20.0	20.0	98.0	NA	86.0	119.0	93.0	100.0	19.0	190.0	7.3	20.0
1,2-dibromo-3-chloropropane	5.0	ND	ND	17.0	NA	20.0	ND	15.6	17.3	20.0	85.0	NA	66.0	134.0	78.0	86.5	60.0	140.0	10.3	20.0
1,2,4-trichlorobenzene	5.0	ND	ND	18.5	NA	20.0	ND	17.6	18.4	20.0	92.5	NA	78.0	122.0	88.0	92.0	60.0	140.0	4.4	20.0
hexachlorobutadiene	5.0	ND	ND	18.4	NA	20.0	ND	17.8	18.0	20.0	92.0	NA	73.0	125.0	89.0	90.0	60.0	140.0	1.1	20.0
napthalene	10.0	ND	ND	19.1	NA	20.0	ND	17.7	19.8	20.0	95.5	NA	74.0	148.0	88.5	99.0	60.0	140.0	11.2	20.0
1,2,3-trichlorobenzene	5.0	ND	ND	18.6	NA	20.0	ND	17.6	18.5	20.0	93.0	NA	74.0	124.0	88.0	92.5	60.0	140.0	5.0	20.0

BLK2 = Second Method Blank
LCS = Laboratory Control Sample
LCS2 = Second Laboratory Control Sample
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LCL = Lower Control Limit
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RPD = Relative Percent Difference

ND = Not Detected
NA = Not Applicable
RDL = Reporting Detection Limit
BLK = Method Blank

REMRON ENVIRONMENTAL SERVICES , OVL
SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP : WG49665
METHOD : 8270
MATRIX : WATER
CONCENTRATION UNITS : UG/L
PREP WORK GRP : WG49510

EXT DATE : 11/18/98
BENCH SHEET : V105P35
BLK FLNM : 8743.D"
LCS FLNM: 8744.D"

RUN DATE : 11/20/98
SMPL ID : NA
SMPL FLNM : NA
MS FLNM : NA
MSD FLNM : NA

INSTRUMENT : HPMS5
ANALYST : mdc

ANALYTE	CONCENTRATION , ug / L								PERCENT RECOVERY , %									PERCENT			BEYOND LIMITS				
	RDL	BLANK	LCS SPIKE ADDED	LCS	SAMPLE	MS SPIKE ADDED	MS	MSD	BLANK	LCS	LCS LCL	LCS UCL	SAMPLE	MS	MSD	MS LCL	MS UCL	MSD RPD	RPD UCL	RPD > LIMIT	SAMPLE	BLANK	LCS	MS	MSD
PYRIDINE	5.0	ND	100	6.8	ND	100	NA	NA	NA	6.8	5	150	NA	NA	NA	5	150	NA	40						
N-NITROSODIMETHYLAMINE	5.0	ND	100	31.5	ND	100	NA	NA	NA	31.5	5	150	NA	NA	NA	5	150	NA	40						
ANILINE	10.0	ND	100	24.8	ND	100	NA	NA	NA	24.8	5	150	NA	NA	NA	5	150	NA	40						
PHENOL	5.0	ND	100	25.3	ND	100	NA	NA	NA	25.3	5	112	NA	NA	NA	5	112	NA	40						
BIS(2-CHLOROETHYL)ETHER	5.0	ND	100	58.8	ND	100	NA	NA	NA	58.8	12	158	NA	NA	NA	12	158	NA	40						
2-CHLOROPHENOL	5.0	ND	100	60.4	ND	100	NA	NA	NA	60.4	23	134	NA	NA	NA	23	134	NA	40						
1,3-DICHLOROBENZENE	5.0	ND	100	49.2	ND	100	NA	NA	NA	49.2	5	172	NA	NA	NA	5	172	NA	40						
1,4-DICHLOROBENZENE	10.0	ND	100	51.5	ND	100	NA	NA	NA	51.5	20	124	NA	NA	NA	20	124	NA	40						
BENZYL ALCOHOL	5.0	ND	100	50.3	ND	100	NA	NA	NA	50.3	5	150	NA	NA	NA	5	150	NA	40						
1,2-DICHLOROBENZENE	5.0	ND	100	51.8	ND	100	NA	NA	NA	51.8	32	129	NA	NA	NA	32	129	NA	40						
2-METHYLPHENOL	5.0	ND	100	59.8	ND	100	NA	NA	NA	59.8	5	150	NA	NA	NA	5	150	NA	40						
BIS(2-CHLOROISOPROPYL)ETH	5.0	ND	100	61.6	ND	100	NA	NA	NA	61.6	36	166	NA	NA	NA	36	166	NA	40						
3- & 4-METHYLPHENOL	5.0	ND	100	54.4	ND	100	NA	NA	NA	54.4	5	150	NA	NA	NA	5	150	NA	40						
N-NITROSO-DI-N-PROPYLAMIN	5.0	ND	100	62.6	ND	100	NA	NA	NA	62.6	5	230	NA	NA	NA	5	230	NA	40						
HEXACHLOROETHANE	5.0	ND	100	49.7	ND	100	NA	NA	NA	49.7	40	113	NA	NA	NA	40	113	NA	40						
NITROBENZENE	5.0	ND	100	60.7	ND	100	NA	NA	NA	60.7	35	180	NA	NA	NA	35	180	NA	40						
ISOPHORONE	5.0	ND	100	71.0	ND	100	NA	NA	NA	71.0	21	196	NA	NA	NA	21	196	NA	40						
2-NITROPHENOL	5.0	ND	100	68.3	ND	100	NA	NA	NA	68.3	29	182	NA	NA	NA	29	182	NA	40						
2,4-DIMETHYLPHENOL	5.0	ND	100	74.8	ND	100	NA	NA	NA	74.8	32	119	NA	NA	NA	32	119	NA	40						
BIS(2-CHLOROETHOXY)METHA	25.0	ND	100	60.8	ND	100	NA	NA	NA	60.8	33	184	NA	NA	NA	33	184	NA	40						
BENZOIC ACID	5.0	ND	100	5.3	ND	100	NA	NA	NA	5.3	5	150	NA	NA	NA	5	150	NA	40						
2,4-DICHLOROPHENOL	5.0	ND	100	70.8	ND	100	NA	NA	NA	70.8	39	135	NA	NA	NA	39	135	NA	40						
1,2,4-TRICHLOROBENZENE	5.0	ND	100	54.5	ND	100	NA	NA	NA	54.5	44	142	NA	NA	NA	44	142	NA	40						
NAPHTHALENE	5.0	ND	100	63.6	ND	100	NA	NA	NA	63.6	21	133	NA	NA	NA	21	133	NA	40						
4-CHLOROANILINE	5.0	ND	100	42.4	ND	100	NA	NA	NA	42.4	5	150	NA	NA	NA	5	150	NA	40						
HEXACHLOROBUTADIENE	10.0	ND	100	57.4	ND	100	NA	NA	NA	57.4	24	116	NA	NA	NA	24	116	NA	40						
4-CHLORO-3-METHYLPHENOL	5.0	ND	100	87.7	ND	100	NA	NA	NA	87.7	22	147	NA	NA	NA	22	147	NA	40						
2-METHYLNAPHTHALENE	5.0	ND	100	63.4	ND	100	NA	NA	NA	63.4	5	150	NA	NA	NA	5	150	NA	40						
HEXACHLOROCYCLOPENTADI	5.0	ND	100	44.7	ND	100	NA	NA	NA	44.7	5	150	NA	NA	NA	5	150	NA	40						
2,4,6-TRICHLOROPHENOL	25.0	ND	100	83.0	ND	100	NA	NA	NA	83.0	37	144	NA	NA	NA	37	144	NA	40						
2,4,5-TRICHLOROPHENOL	5.0	ND	100	92.5	ND	100	NA	NA	NA	92.5	5	150	NA	NA	NA	5	150	NA	40						
2-CHLORONAPHTHALENE	25.0	ND	100	65.9	ND	100	NA	NA	NA	65.9	60	118	NA	NA	NA	60	118	NA	40						
2-NITROANILINE	5.0	ND	100	91.0	ND	100	NA	NA	NA	91.0	5	150	NA	NA	NA	5	150	NA	40						
DIMETHYLPHTHALATE	5.0	ND	100	89.8	ND	100	NA	NA	NA	89.8	5	112	NA	NA	NA	5	112	NA	40						
ACENAPHTHYLENE	5.0	ND	100	78.7	ND	100	NA	NA	NA	78.7	33	145	NA	NA	NA	33	145	NA	40						
2,6-DINITROTOLUENE	5.0	ND	100	86.3	ND	100	NA	NA	NA	86.3	50	158	NA	NA	NA	50	158	NA	40						
3-NITROANILINE	25.0	ND	100	61.0	ND	100	NA	NA	NA	61.0	5	150	NA	NA	NA	5	150	NA	40						
ACENAPHTHENE	5.0	ND	100	79.6	ND	100	NA	NA	NA	79.6	47	145	NA	NA	NA	47	145	NA	40						
2,4-DINITROPHENOL	25.0	ND	100	78.1	ND	100	NA	NA	NA	78.1	5	191	NA	NA	NA	5	191	NA	40						
4-NITROPHENOL	25.0	ND	100	50.2	ND	100	NA	NA	NA	50.2	5	132	NA	NA	NA	5	132	NA	40						
DIBENZOFURAN	5.0	ND	100	81.1	ND	100	NA	NA	NA	81.1	5	150	NA	NA	NA	5	150	NA	40						
2,4-DINITROTOLUENE	5.0	ND	100	98.9	ND	100	NA	NA	NA	98.9	39	139	NA	NA	NA	39	139	NA	40						

NOTES & DEFINITIONS :
NA = NOT APPLICABLE
ND = NOT DETECTED
RDL=REPORTING DETECTION LIMIT

NS = NOT SPIKED
L= below QC limit
H=above QC limit

KEMRON ENVIRONMENTAL SERVICES , OVL
SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP : WG49665
METHOD : 8270
MATRIX : WATER
CONCENTRATION UNITS : UG/L
PREP WORK GRP : WG49510

EXT DATE : 11/18/98
BENCH SHEET : V105P35
BLK FLNM : 8743.D*
LCS FLNM: 8744.D*

RUN DATE : 11/20/98
SMPL ID : NA
SMPL FLNM : NA
MS FLNM : NA
MSD FLNM : NA

INSTRUMENT : HPMS5
ANALYST : mdc

ANALYTE	CONCENTRATION , ug/L								PERCENT RECOVERY , %									PERCENT			BEYOND LIMITS				
	RDL	BLANK	LCS SPIKE ADDED	LCS	SAMPLE	MS SPIKE ADDED	MS	MSD	BLANK	LCS	LCS LCL	LCS UCL	SAMPLE	MS	MSD	MS LCL	MS UCL	MSD RPD	RPD UCL	BEYOND RPD LIMIT	SAMPLE	BLANK	LCS	MS	MSD
DIETHYLPHTHALATE	5.0	ND	100	99.0	ND	100	NA	NA	NA	99.0	5	114	NA	NA	NA	5	114	NA	40						
FLUORENE	5.0	ND	100	93.5	ND	100	NA	NA	NA	93.5	25	158	NA	NA	NA	25	158	NA	40						
4-CHLOROPHENYL-PHENYL ET	5.0	ND	100	89.0	ND	100	NA	NA	NA	89.0	59	121	NA	NA	NA	59	121	NA	40						
4-NITROANILINE	25.0	ND	100	109.3	ND	100	NA	NA	NA	109.3	5	150	NA	NA	NA	5	150	NA	40						
1,2-DIPHENYLHYDRAZINE *	5.0	ND	100	90.9	ND	100	NA	NA	NA	90.9	5	150	NA	NA	NA	5	150	NA	40						
4,6-DINITRO-2-METHYLPHENO	25.0	ND	100	87.1	ND	100	NA	NA	NA	87.1	5	181	NA	NA	NA	5	181	NA	40						
N-NITROSODIPHENYLAMINE **	5.0	ND	100	102.6	ND	100	NA	NA	NA	102.6	5	150	NA	NA	NA	5	150	NA	40						
4-BROMOPHENYL-PHENYL ET	5.0	ND	100	85.6	ND	100	NA	NA	NA	85.6	53	127	NA	NA	NA	53	127	NA	40						
HEXACHLOROBENZENE	5.0	ND	100	99.4	ND	100	NA	NA	NA	99.4	5	152	NA	NA	NA	5	152	NA	40						
PENTACHLOROPHENOL	25.0	ND	100	93.4	ND	100	NA	NA	NA	93.4	14	176	NA	NA	NA	14	176	NA	40						
PHENANTHRENE	5.0	ND	100	110.5	ND	100	NA	NA	NA	110.5	54	120	NA	NA	NA	54	120	NA	40						
ANTHRACENE	5.0	ND	100	109.3	ND	100	NA	NA	NA	109.3	27	133	NA	NA	NA	27	133	NA	40						
CARBAZOLE	5.0	ND	100	118.0	ND	100	NA	NA	NA	118.0	5	150	NA	NA	NA	5	150	NA	40						
DI-N-BUTYLPHTHALATE	5.0	ND	100	119.0	ND	100	NA	NA	NA	119.0	1	118	NA	NA	NA	1	118	NA	40				H		
FLUORANTHENE	5.0	ND	100	122.5	ND	100	NA	NA	NA	122.5	26	137	NA	NA	NA	26	137	NA	40						
PYRENE	5.0	ND	100	120.9	ND	100	NA	NA	NA	120.9	52	115	NA	NA	NA	52	115	NA	40				H		
BUTYLBENZYLPHTHALATE	5.0	ND	100	124.9	ND	100	NA	NA	NA	124.9	5	152	NA	NA	NA	5	152	NA	40						
BENZO(A)ANTHRACENE	10.0	ND	100	119.1	ND	100	NA	NA	NA	119.1	5	262	NA	NA	NA	5	262	NA	40						
3,3'-DICHLOROBENZIDINE	5.0	ND	100	116.9	ND	100	NA	NA	NA	116.9	33	143	NA	NA	NA	33	143	NA	40						
CHRYSENE	5.0	ND	100	134.3	ND	100	NA	NA	NA	134.3	17	168	NA	NA	NA	17	168	NA	40						
BIS(2-ETHYLHEXYL)PHTHALAT	5.0	ND	100	134.0	ND	100	NA	NA	NA	134.0	8	158	NA	NA	NA	8	158	NA	40						
DI-N-OCTYLPHTHALATE	5.0	ND	100	112.6	ND	100	NA	NA	NA	112.6	4	146	NA	NA	NA	4	146	NA	40						
BENZO(B)FLUORANTHENE	5.0	ND	100	111.3	ND	100	NA	NA	NA	111.3	24	159	NA	NA	NA	24	159	NA	40						
BENZO(K)FLUORANTHENE	5.0	ND	100	113.8	ND	100	NA	NA	NA	113.8	11	162	NA	NA	NA	11	162	NA	40						
BENZO(A)PYRENE	5.0	ND	100	115.9	ND	100	NA	NA	NA	115.9	17	163	NA	NA	NA	17	163	NA	40						
INDENO(1,2,3-CD)PYRENE	5.0	ND	100	123.8	ND	100	NA	NA	NA	123.8	5	171	NA	NA	NA	5	171	NA	40						
DIBENZ(A,H)ANTHRACENE	5.0	ND	100	132.5	ND	100	NA	NA	NA	132.5	5	227	NA	NA	NA	5	227	NA	40						
BENZO(G,H,I)PERYLENE	5.0	ND	100	128.5	ND	100	NA	NA	NA	128.5	5	219	NA	NA	NA	5	219	NA	40						
SURROGATES																									
2-FLUOROPHENOL		42.6	100	44.1	NA	100	NA	NA	42.6	44.1	21	100	NA	NA	NA	21	100								
PHENOL - D5		25.2	100	28.1	NA	100	NA	NA	25.2	28.1	10	94	NA	NA	NA	10	94								
NITROBENZENE - D5		32.0	50	33.9	NA	50	NA	NA	63.9	67.7	35	114	NA	NA	NA	35	114								
2-FLUOROBIPHENYL		34.6	50	40.0	NA	50	NA	NA	69.2	79.9	43	116	NA	NA	NA	43	116								
2,4,6-TRIBROMOPHENOL		109.0	100	122.8	NA	100	NA	NA	109.0	122.8	10	123	NA	NA	NA	10	123								
p-TERPHENYL - D14		52.7	50	51.8	NA	50	NA	NA	105.4	103.6	33	141	NA	NA	NA	33	141								

NOTES & DEFINITIONS :

NS = NOT SPIKED

KEMRON ENVIRONMENTAL SERVICES

MARIETTA, OH

QUALITY CONTROL SUMMARY / 8081 WATERS , FRONT

INSTRUMENT : HP9

EXT'N DATE : 11/19/98 ANALYST : ECL BLK FLNM : 1464

EXT'N BENCH SHT : V105P44 RUN DATE : 11/24/98 LCS FLNM : 1465

EXT'N WORK GRP : WG49575 ANAL WORK GRP : WG49716

SAMPLE ID : NA

SMPL FLNM : NA

MS FLNM : NA

MSD FLNM : NA

COMPOUND	RDL	CONCENTRATION , ug/L Blank	LCS	Sample	MS	MSD	% RECOVERY Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	PERCENT MS LCL	MS UCL	MS/MSD RPD	RPD Advsory Limits	Blank	LCS	Sample	MS	MSD
ALPHA-BHC	0.05	ND	0.286	ND	NA	NA	NA	57.2	37	134	NA	#######	#######	51	145	NA	0-43			#	#	
GAMMA-BHC	0.05	ND	0.339	ND	NA	NA	NA	67.8	32	127	NA	#######	#######	54	134	NA	0-18			#	#	
BETA-BHC	0.05	ND	0.408	ND	NA	NA	NA	81.6	17	147	NA	#######	#######	51	129	NA	0-28			#	#	
HEPTACHLOR	0.05	ND	0.310	ND	NA	NA	NA	62.0	34	111	NA	#######	#######	40	139	NA	0-37			#	#	
DELTA-BHC	0.05	ND	0.428	ND	NA	NA	NA	85.6	19	140	NA	#######	#######	56	138	NA	0-78			#	#	
ALDRIN	0.05	ND	0.289	ND	NA	NA	NA	57.8	42	122	NA	#######	#######	28	143	NA	0-38			#	#	
HEPTACHLOR EPOXIDE	0.05	ND	0.370	ND	NA	NA	NA	74.0	37	142	NA	#######	#######	51	135	NA	0-40			#	#	
GAMMA-CHLORDANE	0.05	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-50					
ALPHA-CHLORDANE	0.05	ND	NA	ND	NA	NA	NA	NA	54	119	NA	NA	NA	45	115	NA	0-17					
ENDOSULFAN I	0.05	ND	0.277	ND	NA	NA	NA	55.4	45	153	NA	#######	#######	37	123	NA	0-22			#	#	
4,4-DDE	0.10	ND	0.347	ND	NA	NA	NA	69.4	30	145	NA	#######	#######	64	152	NA	0-23			#	#	
DIELDRIN	0.10	ND	0.397	ND	NA	NA	NA	79.4	36	146	NA	#######	#######	23	171	NA	0-20			#	#	
ENDRIN	0.10	ND	0.396	ND	NA	NA	NA	79.2	30	147	NA	#######	#######	56	154	NA	0-28			#	#	
4,4-DDD	0.10	ND	0.386	ND	NA	NA	NA	77.2	81	141	NA	#######	#######	56	179	NA	0-38			#	#	
ENDOSULFAN II	0.10	ND	0.299	ND	NA	NA	NA	59.8	D	202	NA	#######	#######	21	117	NA	0-18			#	#	
4,4-DDT	0.10	ND	0.368	ND	NA	NA	NA	73.6	25	160	NA	#######	#######	42	168	NA	0-22			#	#	
ENDRIN ALDEHYDE	0.10	ND	0.259	ND	NA	NA	NA	51.8	NA	NA	NA	#######	#######	21	115	NA	0-40			#	#	
ENDOSULFAN SULFATE	0.10	ND	0.266	ND	NA	NA	NA	53.2	26	144	NA	#######	#######	31	117	NA	0-30			#	#	
METHOXYCHLOR	0.50	ND	0.379	ND	NA	NA	NA	75.8	NA	NA	NA	#######	#######	28	196	NA	0-19			#	#	
ENDRIN KETONE	0.10	ND	0.324	ND	NA	NA	NA	64.8	NA	NA	NA	#######	#######	NA	NA	NA						
Tech-CHLORDANE	1.00	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40					
TOXAPHENE	1.00	ND	NA	ND	NA	NA	NA	NA	41	126	NA	NA	NA	40	125	NA	0-40					
SURROGATES																						
2,4,5,6-TETRACHLORO-M-XYLENE		9.97	9.28	NA	NA	NA	49.8	46.4	33	154	NA	NA	NA	10	154							
DECACHLOROBIPHENYL		9.68	11.1	NA	NA	NA	48.4	55.4	25	140	NA	NA	NA	25	140							

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 0.5 ug/L

SURROGATES spiked at 20 ug/L

NA = NOT APPLICABLE

DL = DILUTED OUT

ND = NOT DETECTED

RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE

MS=MATRIX SPIKE

MSD=MATRIX SPIKE DUPLICATE

KEMRON ENVIRONMENTAL SERVICES

MARIETTA, OH

QUALITY CONTROL SUMMARY / 8081 WATERS , REAR

INSTRUMENT : HP9

EXT'N DATE : 11/19/98 ANALYST : ECL BLK FLNM : 1464

EXT'N BENCH SHT : V105P44 RUN DATE : 11/24/98 LCS FLNM : 1465

EXT'N WORK GRP : WG49575 ANAL WORK GRP : WG49716

SAMPLE ID : NA

SMPL FLNM : NA

MS FLNM : NA

MSD FLNM : NA

COMPOUND	RDL	CONCENTRATION , ug/L Blank	LCS	Sample	MS	MSD	% RECOVERY Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	PERCENT MS LCL	MS UCL	MS/MSD RPD	RPD Advisory Limists	Blank	LCS	Sample	MS	MSD
ALPHA-BHC	0.05	ND	0.297	I ND	NA	NA	NA	59.4	37	134	NA	#######	#######	51	145	NA	0-43				#	#
GAMMA-BHC	0.05	ND	0.340	I ND	NA	NA	NA	68.0	32	127	NA	#######	#######	54	134	NA	0-18				#	#
BETA-BHC	0.05	ND	0.386	I ND	NA	NA	NA	77.2	17	147	NA	#######	#######	51	129	NA	0-28				#	#
HEPTACHLOR	0.05	ND	0.302	I ND	NA	NA	NA	60.4	34	111	NA	#######	#######	40	139	NA	0-37				#	#
DELTA-BHC	0.05	ND	0.433	I ND	NA	NA	NA	86.6	19	140	NA	#######	#######	56	138	NA	0-78				#	#
ALDRIN	0.05	ND	0.294	I ND	NA	NA	NA	58.8	42	122	NA	#######	#######	28	143	NA	0-38				#	#
HEPTACHLOR EPOXIDE	0.05	ND	0.386	I ND	NA	NA	NA	77.2	37	142	NA	#######	#######	51	135	NA	0-40				#	#
GAMMA-CHLORDANE	0.05	ND	NA	I ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40					
ALPHA-CHLORDANE	0.05	ND	NA	I ND	NA	NA	NA	NA	54	119	NA	NA	NA	45	115	NA	0-17					
ENDOSULFAN I	0.05	ND	0.282	I ND	NA	NA	NA	56.4	45	153	NA	#######	#######	37	123	NA	0-22				#	#
4,4-DDE	0.10	ND	0.383	I ND	NA	NA	NA	76.6	30	145	NA	#######	#######	64	152	NA	0-23				#	#
DIELDRIN	0.10	ND	0.431	I ND	NA	NA	NA	86.2	38	146	NA	#######	#######	23	171	NA	0-20				#	#
ENDRIN	0.10	ND	0.409	I ND	NA	NA	NA	81.8	30	147	NA	#######	#######	56	154	NA	0-28				#	#
4,4-DDD	0.10	ND	0.406	I ND	NA	NA	NA	81.2	31	141	NA	#######	#######	58	179	NA	0-30				#	#
ENDOSULFAN II	0.10	ND	0.310	I ND	NA	NA	NA	62.0	D	202	NA	#######	#######	21	117	NA	0-18				#	#
4,4-DDT	0.10	ND	0.397	I ND	NA	NA	NA	79.4	25	160	NA	#######	#######	42	158	NA	0-22				#	#
ENDRIN ALDEHYDE	0.10	ND	0.277	I ND	NA	NA	NA	55.4	NA	NA	NA	#######	#######	21	115	NA	0-40				#	#
ENDOSULFAN SULFATE	0.10	ND	0.293	I ND	NA	NA	NA	58.6	26	144	NA	#######	#######	31	117	NA	0-30				#	#
METHOXYCHLOR	0.10	ND	0.405	I ND	NA	NA	NA	81	NA	NA	NA	#######	#######	26	196	NA	0-19				#	#
ENDRIN KETONE	0.50	ND	0.357	I ND	NA	NA	NA	71	NA	NA	NA	#######	#######	NA	NA	NA						
Tech-CHLORDANE	1.0	ND	NA	I ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40					
TOXAPHENE	1.0	ND	NA	I ND	NA	NA	NA	NA	41	126	NA	NA	NA	40	125	NA	0-40					
SURROGATES																						
2,4,5,6-TETRACHLORO-M-XYLENE		8.54	9.29	I NA	NA	NA	42.7	46.5	13	154	NA	NA	NA	13	154							
DECACHLOROBIPHENYL		10.1	12.6	I NA	NA	NA	50.5	62.8	25	140	NA	NA	NA	25	140							

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 0.5 ug/L

SURROGATES spiked at 20 ug/L

NA = NOT APPLICABLE

DL = DILUTED OUT

ND = NOT DETECTED

RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE

MS=MATRIX SPIKE

MSD=MATRIX SPIKE DUPLICATE

KEMRON ENVIRONMENTAL SERVICES
MARIETTA, OH
QUALITY CONTROL SUMMARY / PCB WATERS , REAR

EXT'N DATE : 11/19/96
EXT'N BENCH SHT : V105P45
EXT'N WORK GRP : WG49576

INSTRUMENT : HP10
ANALYST : CDB
RUN DATE : 11/20/96
ANAL WORK GRP : WG49595

BLK FLNM : 055R0101
LCS FLNM : 056R0101
LCS Dup FLNM : NA

SMPL ID : 11-339-01
SMPL FLNM : 059R0101
MS FLNM : 060R0101
MSD FLNM : 061R0101

COMPOUND	RDL	CONCENTRATION , ug/L					% RECOVERY									PERCENT						
		Blank	LCS	Sample	MS	MSD	Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	RPD	RPD Advisory Limits	Blank	LCS	Sample	MS	MSD
AROCLOR 1016	0.5	ND	2.88	ND	5.84	5.37	NA	115	48	125	NA	117	107	48	125	8.5	NA					
AROCLOR 1221	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1232	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1242	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1248	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1254	1.0	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0-40					
AROCLOR 1260	1.0	ND	2.41	ND	4.85	4.62	NA	96.6	59	122	NA	97.1	92.4	59	122	4.9	NA					
SURROGATES																						
2,4,5,6-TETRACHLORO-M-XYLENE		0.140	0.214	0.136	0.336	0.289	70.0	107	13	154	68.0	84.0	72.3	13	154							
DECACHLOROBIPHENYL		0.121	0.204	0.136	0.293	0.313	60.5	102	25	140	68.0	73.3	78.3	25	140							

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at .25 ug/kg
SURROGATES spiked at .0200 ug/kg
NA = NOT APPLICABLE
DL = DILUTED OUT
ND = NOT DETECTED
RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE
MS=MATRIX SPIKE
MSD=MATRIX SPIKE DUPLICATE

ENVIRONMENTAL SERVICES

CHAIN-OF-CUSTODY RECORD

Project Contact: Willy Burton

Turn Around Requirements:

Project No.: 4119-007 Project Name: PACOE Pedricktown

Sampler (print): Klingbiel Signature: Erin Klingbiel

Sample I.D. No.	Comp*	Grab	Date	Time	Protocol CWA	Protocol SW846	NUMBER OF SAMPLES	Hold	Pest/PCB	VOC	SVOC	TSS	ADDITIONAL REQUIREMENTS
WEIR 1116	✓		11/16/98	930			2		1			1	
WEIR 1116		✓	11/16/98	930			2			1	1		
WEIR 1115	✓		11/15/98	930			1					1	
WEIR 1114	✓		11/14/98	930			1					1	
WEIR 1113	✓		11/13/98	930			1					1	
MIX 1116		✓	11/16/98	1030			4		1	1	1	1	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Erin Klingbiel	11/16/98	1400					

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:
			Natalie Booth	11/17/98	0942	c/c Sealed Samples intact Cooler temp C

*Homogenize all composite samples prior to analysis

White – Lab Yellow – Office Pink – Field

Work Order 19811292 Client Ver-Ish #of Samples 7 Due Date 12/1 Page 1

Sample #	Analyses	Reason	Removed By ADT	Removed From	MovedTo	Reliq. By	Ret'd by ADT	Ret'd To	Rec'd By	Reason
3,6	TDS	GXT	CSH 11/18/98@1300	WALKIN	E-LAB	Big	CSH 11/18/98@1300	DUMPSTER	Big	DISPOSAL
1,3-6	TSS	AN	TJW 11-19-98 @1245	WALKIN	WET	Big	TJW 11-19-98 @ 1605	Archive	Big	Archive
01,06	8081P/PB	GXT	MH 11/19/98@1645	WALK-IN	E-LAB	Big	MH 11/20/98@0800	DUMPSTER	Big	DISPOSAL
2,6	8260	anal	CMH 11/19/98@1525	V-1	VOA	Big	MH 11/19/98@1430	archive	Big	Archive

KEMRON Environmental Services
109 Satellite Park
Marietta, Ohio 45750
Phone: (740) 373-4071

Versar, Inc.
9200 Rumsey Road
Columbia, MD 21045-1934

Attention: William Burton

PO Number:
Account Number: VERSAR-MD-331

Login #: L9811376
Report Date: 12/01/98
Work ID: 4119-007/PACOE PEDRICKTOWN
Date Received: 11/20/98

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9811376-01	WEIR 1119/GRAB	L9811376-02	WEIR 1119/COMP
L9811376-03	MIX 1119	L9811376-04	WIER 1117
L9811376-05	WIER 1118		

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

Certified By
Dennis S. Tepe

KEMRON
ENVIRONMENTAL SERVICES

Login #L9811376
December 1, 1998 10:00 am

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811376-01
Client Sample ID: WEIR 1119/GRAB
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/19/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/23/98
Analysis Date: 11/23/98 Time: 14:53

Instrument: HPMS5
Analyst: MDC
Lab File ID: 8771

Method: 8270C\3510C
Run ID: R56672
Batch : WG49720

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L		ND	10	2
111-44-4	Bis(2-Chloroethyl)ether	ug/L		ND	10	2
95-57-8	2-Chlorophenol	ug/L		ND	10	2
541-73-1	1,3-Dichlorobenzene	ug/L		ND	10	2
106-46-7	1,4-Dichlorobenzene	ug/L		ND	10	2
95-50-1	1,2-Dichlorobenzene	ug/L		ND	10	2
95-48-7	2-Methylphenol	ug/L		ND	10	2
108-60-1	bis(2-Chloroisopropyl)ether	ug/L		ND	10	2
106-44-5	4-Methylphenol	ug/L		ND	10	2
621-64-7	N-Nitroso-di-n-propylamine	ug/L		ND	10	2
67-72-1	Hexachloroethane	ug/L		ND	10	2
98-95-3	Nitrobenzene	ug/L		ND	10	2
78-59-1	Isophorone	ug/L		ND	10	2
88-75-5	2-Nitrophenol	ug/L		ND	10	2
105-67-9	2,4-Dimethylphenol	ug/L		ND	10	2
111-91-1	Bis(2-Chloroethoxy)Methane	ug/L		ND	10	2
120-83-2	2,4-Dichlorophenol	ug/L		ND	10	2
120-82-1	1,2,4-Trichlorobenzene	ug/L		ND	10	2
91-20-3	Naphthalene	ug/L		ND	10	2
106-47-8	4-Chloroaniline	ug/L		ND	10	2
87-68-3	Hexachlorobutadiene	ug/L		ND	10	2
59-50-7	4-Chloro-3-methylphenol	ug/L		ND	10	2
91-57-6	2-Methylnaphthalene	ug/L		ND	10	2
77-47-4	Hexachlorocyclopentadiene	ug/L		ND	10	2
88-06-2	2,4,6-Trichlorophenol	ug/L		ND	10	2
95-95-4	2,4,5-Trichlorophenol	ug/L		ND	50	2
91-58-7	2-Chloronaphthalene	ug/L		ND	10	2
88-74-4	2-Nitroaniline	ug/L		ND	50	2
131-11-3	Dimethylphthalate	ug/L		ND	10	2
208-96-8	Acenaphthylene	ug/L		ND	10	2
606-20-2	2,6-Dinitrotoluene	ug/L		ND	10	2
99-09-2	3-Nitroaniline	ug/L		ND	50	2
83-32-9	Acenaphthene	ug/L		ND	10	2
51-28-5	2,4-Dinitrophenol	ug/L		ND	50	2
100-02-7	4-Nitrophenol	ug/L		ND	50	2
132-64-9	Dibenzofuran	ug/L		ND	10	2
121-14-2	2,4-Dinitrotoluene	ug/L		ND	10	2
84-66-2	Diethylphthalate	ug/L		ND	10	2
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L		ND	10	2

RL = Reporting Limit

KEMRON ENVIRO[illegible]ENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811376-01
Client Sample ID: WEIR 1119/GRAB
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/19/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/23/98
Analysis Date: 11/23/98 Time: 14:53

Instrument: HPMS5
Analyst: MDC
Lab File ID: 8771

Method: 8270C\3510C
Run ID: R56672
Batch : WG49720

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L		ND	10	2
100-01-6	4-Nitroaniline	ug/L		ND	50	2
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	50	2
86-30-6	N-Nitrosodiphenylamine	ug/L		ND	10	2
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	10	2
118-74-1	Hexachlorobenzene	ug/L		ND	10	2
87-86-5	Pentachlorophenol	ug/L		ND	50	2
85-01-8	Phenanthrene	ug/L		ND	10	2
120-12-7	Anthracene	ug/L		ND	10	2
86-74-8	Carbazole	ug/L		ND	10	2
84-74-2	Di-N-Butylphthalate	ug/L		ND	10	2
206-44-0	Fluoranthene	ug/L		ND	10	2
129-00-0	Pyrene	ug/L		ND	10	2
85-68-7	Butylbenzylphthalate	ug/L		ND	10	2
91-94-1	3,3'-Dichlorobenzidine	ug/L		ND	20	2
56-55-3	Benzo(a)anthracene	ug/L		ND	10	2
218-01-9	Chrysene	ug/L		ND	10	2
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	10	2
117-84-0	Di-n-octylphthalate	ug/L		ND	10	2
205-99-2	Benzo(b)fluoranthene	ug/L		ND	10	2
207-08-9	Benzo(k)fluoranthene	ug/L		ND	10	2
50-32-8	Benzo(a)pyrene	ug/L		ND	10	2
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L		ND	10	2
53-70-3	Dibenzo(a,h)Anthracene	ug/L		ND	10	2
191-24-2	Benzo(g,h,i)Perylene	ug/L		ND	10	2

SURROGATES- In Percent Recovery:

2-Fluorophenol	43.5	(21 - 100%)
Phenol-d5	27.1	(10 - 94%)
Nitrobenzene-d5	62.4	(35 - 114%)
2-Fluorobiphenyl	77.5	(43 - 116%)
2,4,6-Tribromophenol	117	(10 - 123%)
p-Terphenyl-d14	95.7	(33 - 141%)

RL = Reporting Limit

Login #L9811376
December 1, 1998 10:00 am

KEMRON ENVIRONMENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811376-01
Client Sample ID: WEIR 1119/GRAB
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/19/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/25/98 Time: 15:23

Instrument: HPMS9
Analyst: SLT
Lab File ID: 9VR00431

Method: 8260B
Run ID: R56816
Batch : WG49821

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/L		ND	10	1
74-83-9	Bromomethane	ug/L		ND	10	1
75-01-4	Vinyl chloride	ug/L		ND	10	1
75-00-3	Chloroethane	ug/L		ND	10	1
75-09-2	Methylene chloride	ug/L		ND	5.0	1
67-64-1	Acetone	ug/L	11		10	1
75-15-0	Carbon disulfide	ug/L		ND	5.0	1
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1
75-34-3	1,1-Dichloroethane	ug/L		ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L		ND	5.0	1
67-66-3	Chloroform	ug/L		ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	1
78-93-3	2-Butanone	ug/L		ND	10	1
71-55-6	1,1,1-Trichloroethane	ug/L		ND	5.0	1
56-23-5	Carbon tetrachloride	ug/L		ND	5.0	1
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	1
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	1
79-01-6	Trichloroethene	ug/L		ND	5.0	1
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1
71-43-2	Benzene	ug/L		ND	5.0	1
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	1
75-25-2	Bromoform	ug/L		ND	5.0	1
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	1
591-78-6	2-Hexanone	ug/L		ND	10	1
127-18-4	Tetrachloroethene	ug/L		ND	5.0	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0	1
108-88-3	Toluene	ug/L		ND	5.0	1
108-90-7	Chlorobenzene	ug/L		ND	5.0	1
100-41-4	Ethyl benzene	ug/L		ND	5.0	1
100-42-5	Styrene	ug/L		ND	5.0	1
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1

SURROGATES- In Percent Recovery:

Dibromofluoromethane	105	(86 - 118%)
Toluene-d8	106	(88 - 110%)
p-Bromofluorobenzene	106	(86 - 115%)
1,2-Dichloroethane-d4	98.1	(80 - 120%)

RL = Reporting Limit

KEMRON ENVIR[illegible]ENTAL SERVICES

Lab Sample ID: L9811376-02
Client Sample ID: WEIR 1119/COMP
Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water
Collected: 11/19/98 1100

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	11		5.0	1	N/A	DLN	11/23/98	09:00	160.2

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811376-02
Client Sample ID: WEIR 1119/COMP
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/23/98
Analysis Date: 11/23/98 Time: 16:38

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/19/98

Instrument: HP10
Analyst: CDB
Lab File ID: 054R0101

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8082/3550
Run ID: R56839
Batch : WG49690

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016.....	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221.....	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232.....	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242.....	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248.....	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254.....	ug/L		ND	1.0	1
11096-82-5	Aroclor-1260.....	ug/L		ND	1.0	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene.....	42.4	(13 - 154%)
Decachlorobiphenyl.....	38.4	(25 - 140%)

RL = Reporting Limit

Login #L9811376
December 1, 1998 10:00 am

KEMRON ENVIRONMENTAL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811376-02
Client Sample ID: WEIR 1119/COMP
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/23/98
Analysis Date: 11/24/98 Time:

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/19/98

Instrument: HP9
Analyst: ECL
Lab File ID: 1472

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8081A\3510C
Run ID: R56840
Batch : WG49717

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L		ND	0.05	1
319-85-7	beta-BHC	ug/L		ND	0.05	1
319-86-8	delta-BHC	ug/L		ND	0.05	1
76-44-8	Heptachlor	ug/L		ND	0.05	1
309-00-2	Aldrin	ug/L		ND	0.05	1
1024-57-3	Heptachlor epoxide	ug/L		ND	0.05	1
959-98-8	Endosulfan I	ug/L		ND	0.05	1
60-57-1	Dieldrin	ug/L		ND	0.10	1
72-55-9	4,4'-DDE	ug/L		ND	0.10	1
72-20-8	Endrin	ug/L		ND	0.10	1
33213-65-9	Endosulfan II	ug/L		ND	0.10	1
72-54-8	4,4'-DDD	ug/L		ND	0.10	1
1031-07-8	Endosulfan sulfate	ug/L		ND	0.10	1
50-29-3	4,4'-DDT	ug/L		ND	0.10	1
72-43-5	Methoxychlor	ug/L		ND	0.50	1
53494-70-5	Endrin ketone	ug/L		ND	0.10	1
7421-93-4	Endrin aldehyde	ug/L		ND	0.10	1
5103-71-9	alpha Chlordane	ug/L		ND	0.05	1
5103-74-2	gamma Chlordane	ug/L		ND	0.05	1
8001-35-2	Toxaphene	ug/L		ND	1.0	1
	gamma-BHC (Lindane)	ug/L		ND	0.05	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	62.6	(13 - 154%)
Decachlorobiphenyl	61.0	(25 - 140%)

RL = Reporting Limit

Lab Sample ID: L9811376-03
Client Sample ID: MIX 1119
Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water
Collected: 11/19/98 1200

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	19		5.0	1	N/A	DLN	11/23/98	09:00	160.2

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811376-03
Client Sample ID: MIX 1119
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/23/98
Analysis Date: 11/23/98 Time: 17:14

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/19/98

Instrument: HP10
Analyst: CDB
Lab File ID: 055R0101

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8082/3550
Run ID: R56839
Batch : WG49690

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016.....	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221.....	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232.....	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242.....	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248.....	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254.....	ug/L		ND	1.0	1
11096-82-5	Aroclor-1260.....	ug/L		ND	1.0	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene.....	61.0	(13 - 154%)
Decachlorobiphenyl.....	77.5	(25 - 140%)

RL = Reporting Limit

Login #L9811376
December 1, 1998 10:00 am

KEMRON ENVIRONMENTAL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811376-03
Client Sample ID: MIX 1119
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/19/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/23/98
Analysis Date: 11/24/98 Time:

Instrument: HP9
Analyst: ECL
Lab File ID: 1473

Method: 8081A\3510C
Run ID: R56840
Batch : WG49717

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L		ND	0.05	1
319-85-7	beta-BHC	ug/L		ND	0.05	1
319-86-8	delta-BHC	ug/L		ND	0.05	1
76-44-8	Heptachlor	ug/L		ND	0.05	1
309-00-2	Aldrin	ug/L		ND	0.05	1
1024-57-3	Heptachlor epoxide	ug/L		ND	0.05	1
959-98-8	Endosulfan I	ug/L		ND	0.05	1
60-57-1	Dieldrin	ug/L		ND	0.10	1
72-55-9	4,4'-DDE	ug/L		ND	0.10	1
72-20-8	Endrin	ug/L		ND	0.10	1
33213-65-9	Endosulfan II	ug/L		ND	0.10	1
72-54-8	4,4'-DDD	ug/L		ND	0.10	1
1031-07-8	Endosulfan sulfate	ug/L		ND	0.10	1
50-29-3	4,4'-DDT	ug/L		ND	0.10	1
72-43-5	Methoxychlor	ug/L		ND	0.50	1
53494-70-5	Endrin ketone	ug/L		ND	0.10	1
7421-93-4	Endrin aldehyde	ug/L		ND	0.10	1
5103-71-9	alpha Chlordane	ug/L		ND	0.05	1
5103-74-2	gamma Chlordane	ug/L		ND	0.05	1
8001-35-2	Toxaphene	ug/L		ND	1.0	1
	gamma-BHC (Lindane)	ug/L		ND	0.05	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	53.7	(13 - 154%)
Decachlorobiphenyl	75.0	(25 - 140%)

RL = Reporting Limit

KEMRON ENVIR[illegible]ENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811376-03
Client Sample ID: MIX 1119
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/23/98
Analysis Date: 11/23/98 Time: 15:34

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/19/98

Instrument: HPMS5
Analyst: MDC
Lab File ID: 8772

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8270C\3510C
Run ID: R56672
Batch : WG49720

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L		ND	11	2.22
111-44-4	Bis(2-Chloroethyl)ether	ug/L		ND	11	2.22
95-57-8	2-Chlorophenol	ug/L		ND	11	2.22
541-73-1	1,3-Dichlorobenzene	ug/L		ND	11	2.22
106-46-7	1,4-Dichlorobenzene	ug/L		ND	11	2.22
95-50-1	1,2-Dichlorobenzene	ug/L		ND	11	2.22
95-48-7	2-Methylphenol	ug/L		ND	11	2.22
108-60-1	bis(2-Chloroisopropyl)ether	ug/L		ND	11	2.22
106-44-5	4-Methylphenol	ug/L		ND	11	2.22
621-64-7	N-Nitroso-di-n-propylamine	ug/L		ND	11	2.22
67-72-1	Hexachloroethane	ug/L		ND	11	2.22
98-95-3	Nitrobenzene	ug/L		ND	11	2.22
78-59-1	Isophorone	ug/L		ND	11	2.22
88-75-5	2-Nitrophenol	ug/L		ND	11	2.22
105-67-9	2,4-Dimethylphenol	ug/L		ND	11	2.22
111-91-1	Bis(2-Chloroethoxy)Methane	ug/L		ND	11	2.22
120-83-2	2,4-Dichlorophenol	ug/L		ND	11	2.22
120-82-1	1,2,4-Trichlorobenzene	ug/L		ND	11	2.22
91-20-3	Naphthalene	ug/L		ND	11	2.22
106-47-8	4-Chloroaniline	ug/L		ND	11	2.22
87-68-3	Hexachlorobutadiene	ug/L		ND	11	2.22
59-50-7	4-Chloro-3-methylphenol	ug/L		ND	11	2.22
91-57-6	2-Methylnaphthalene	ug/L		ND	11	2.22
77-47-4	Hexachlorocyclopentadiene	ug/L		ND	11	2.22
88-06-2	2,4,6-Trichlorophenol	ug/L		ND	11	2.22
95-95-4	2,4,5-Trichlorophenol	ug/L		ND	11	2.22
91-58-7	2-Chloronaphthalene	ug/L		ND	56	2.22
88-74-4	2-Nitroaniline	ug/L		ND	11	2.22
131-11-3	Dimethylphthalate	ug/L		ND	56	2.22
208-96-8	Acenaphthylene	ug/L		ND	11	2.22
606-20-2	2,6-Dinitrotoluene	ug/L		ND	11	2.22
99-09-2	3-Nitroaniline	ug/L		ND	11	2.22
83-32-9	Acenaphthene	ug/L		ND	56	2.22
51-28-5	2,4-Dinitrophenol	ug/L		ND	11	2.22
100-02-7	4-Nitrophenol	ug/L		ND	56	2.22
132-64-9	Dibenzofuran	ug/L		ND	56	2.22
121-14-2	2,4-Dinitrotoluene	ug/L		ND	11	2.22
84-66-2	Diethylphthalate	ug/L		ND	11	2.22
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L		ND	11	2.22

RL = Reporting Limit

KEMRON ANALYST LIST

Ohio Valley Laboratory

10/28/98

ALC - - Ann L. Clark
BAD - - Becky A. Diehl
CEB - - Chad E. Barnes
CDB - - Christy D. Burton
CLH - - Chris L. Hurst
CMS - - Crystal M. Stevens
CRC - - Carla R. Cochran
DIH - - Deanna I. Hesson
DKM - - Dewey K. Miller
DLN - - Deanna L. Norton
DLP - - Dorothy L. Payne
ECL - - Eric C. Lawson
FEH - - Fay E. Harmon
HV - - Hema Vilasagar
JLH - - Janice L. Holland
JWR - - John W. Richards
JYH - - Ji Y. Hu
KHA - - Kim H. Archer
KAS - - Kevin A. Stutler
KRA - - Kathy R. Albertson
MDA - - Mike D. Albertson
MDC - - Michael D. Cochran
MES - - Mary E. Schiling
MLS - - Michael L. Schimmel
MMB - - Maren M. Beery
RDC - - Rebecca D. Cutlip
RDS - - Rebecca D. Sutton
REF - - Ron E. Fertile
REK - - Robert E. Kyer
RSS - - Regina S. Simmons
RWC - - Rodney W. Campbell
SJK - - Sindy J. Kinney
SJM - - Shawn J. Marshall
SLP - - Sheri L. Pfalzgraf
SLT - - Stephanie L. Tepe
SMW - - Shauna M. Welch
SPL - - Steve P. Learn
TJW - - Thomas J. Ware
TRS - - Todd R. Stack
VC - - Vicki Collier
VMN - - Vincent M. Nedeff

KEMRON Environmental Services, Inc.
LIST OF VALID QUALIFIERS (qual)
March 9, 1998

Qualifier	Description
(A)	See the report narrative
(B)	See the report narrative
(C)	See the report narrative
+	Correlation coefficient for the MSA is less than 0.995
<	Less than
>	Greater than
B	Present in the method blank
C	Confirmed by GC/MS
*	Surrogate or spike compound out of range
CG	Confluent growth
D	The analyte was quantified at a secondary dilution factor
DL	Surrogate or spike was diluted out
E	Estimated concentration due to sample matrix interference
F	Present below nominal reporting limit (AFCEE only)
FL	Free liquid
I	Semiquantitative result, out of instrument calibration range
J	Present below nominal reporting limit
L	Sample reporting limits elevated due to matrix interference
M	Duplicate injection precision not met

Qualifier	Description
N	Tentatively Identified Compound (TIC)
NA	Not applicable
ND	Not detected at or above the reporting limit (RL)
NF	Not found
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentration > 25% difference between the two GC columns
QNS	Quantity not sufficient to perform analysis
R	Analyte exceeds regulatory limit
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TNTC	Too numerous to count
U	Analyzed for but not detected
W	Post-digestion spike for furnace AA out of control limits
X	Can not be resolved from isomer. See below.

Special Notes for Organic Analytes

1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

INORGANIC QA/QC

Kemron
ENVIRONMENTAL SERVICES

KEMRON ENVIRONMENTAL SERVICES
OHIO VALLEY LABORATORY
QUALITY CONTROL SUMMARY

WORKGROUP: wg49759
METHOD: 160.2
MATRIX: Water
UNITS: mg/L

RUN DATE: 11/23/98
ANALYST: dln
DUPLICATE: 11-365-03

ANALYTE	RDL	Blank	T-LCS	LCS	REP1	REP2	SAMPLE RESULT	T-MS	MS	PERCENT RECOVERY LCS	LCS LCL	LCS UCL	MS	MS LCL	MS UCL	PERCENT RPD REP RPD	RPD UCL
TSS	5.00	ND	50.00	47.00	106.00	109.00	NR	NR	NR	94.0	81.0	114.5	NR	NR	NR	2.79	20.00

NOTES & DEFINITIONS :

RDL = REPORTING DETECTION LIMIT
DL = DILUTED OUT
NA = NOT APPLICABLE
ND = NOT DETECTED
NR = NOT REQUIRED

LCS = LABORATORY CONTROL SAMPLE
T- LCS = TRUE VALUE OF LCS
REP1 = UNSPIKED SAMPLE REPLICATE 1
REP2 = UNSPIKED SAMPLE REPLICATE 2
SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX
T-MS = TRUE VALUE OF MATRIX SPIKE
MS = MATRIX SPIKE
LCL = LOWER CONTROL LIMIT
UCL = UPPER CONTROL LIMIT

REP RPD = RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES

ORGANIC QA/QC

Kemron
ENVIRONMENTAL SERVICES

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49821	Run Date:	11/25/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_9	SMPL Num:	11-331-05	SMPL DF:	1
Matrix:	Water	BLK FLNM:	9BK00425	SMPL FLNM:	9AM00428	MS DF:	1
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	9AM00429	MSD DF:	1
		LCS FLNM:	9QC00426	MSD FLNM:	9AM00430		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
				LCS Spike						MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
dichlorodifluoromethane	10.0	ND	ND	20.3	NA	20.0	ND	18.2	19.7	20.0	101.5	NA	38.0	148.0	91.0	98.5	60.0	140.0	7.9	20.0
chloromethane	10.0	ND	ND	19.4	NA	20.0	ND	18.1	19.0	20.0	97.0	NA	56.0	132.0	90.5	95.0	D	273.0	4.9	20.0
vinyl chloride	10.0	ND	ND	23.0	NA	20.0	ND	21.3	22.1	20.0	115.0	NA	68.0	125.0	106.5	110.5	D	251.0	3.7	20.0
bromomethane	10.0	ND	ND	24.1	NA	20.0	ND	22.9	22.1	20.0	120.5	NA	55.0	138.0	114.5	110.5	D	242.0	3.6	20.0
chloroethane	10.0	ND	ND	21.4	NA	20.0	ND	20.5	19.4	20.0	107.0	NA	57.0	128.0	102.5	97.0	14.0	230.0	5.5	20.0
trichlorofluoromethane	10.0	ND	ND	20.2	NA	20.0	ND	20.8	20.7	20.0	101.0	NA	70.0	127.0	104.0	103.5	17.0	181.0	0.5	20.0
freon 113	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	70.0	130.0	NA	20.0
acetone	100.0	ND	ND	18.7	NA	20.0	ND	18.2	18.8	20.0	93.5	NA	44.0	114.0	91.0	94.0	70.0	130.0	3.2	20.0
1,1-dichloroethene	5.0	ND	ND	20.5	NA	20.0	ND	20.3	20.5	20.0	102.5	NA	69.0	144.0	101.5	102.5	D	234.0	1.0	20.0
iodomethane	NTC	ND	ND	25.0	NA	20.0	ND	12.4	26.0	20.0	125.0	NA	NA	NA	62.0	130.0	70.0	130.0	70.8	20.0
methylene chloride	5.0	ND	ND	22.5	NA	20.0	ND	22.4	21.6	20.0	112.5	NA	71.0	128.0	112.0	108.0	D	221.0	3.6	20.0
carbon disulfide	5.0	ND	ND	19.5	NA	20.0	ND	19.7	19.7	20.0	97.5	NA	67.0	136.0	98.5	98.5	70.0	130.0	0.0	20.0
acrylonitrile	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	70.0	130.0	NA	20.0
trans-1,2-dichloroethene	5.0	ND	ND	21.3	NA	20.0	ND	21.6	21.8	20.0	106.5	NA	85.0	133.0	108.0	109.0	54.0	156.0	0.9	20.0
vinyl acetate	10.0	ND	ND	27.1	NA	20.0	ND	27.0	27.5	20.0	135.5	NA	9.0	236.0	135.0	137.5	9.0	236.0	1.8	20.0
1,1-dichloroethane	5.0	ND	ND	19.8	NA	20.0	ND	19.9	20.6	20.0	99.0	NA	82.0	124.0	99.5	103.0	59.0	155.0	3.5	20.0
2-butanone	100.0	ND	ND	20.3	NA	20.0	ND	18.3	18.8	20.0	101.5	NA	43.0	140.0	91.5	94.0	70.0	130.0	2.7	20.0
2,2-dichloropropane	5.0	ND	ND	21.0	NA	20.0	ND	21.4	21.5	20.0	105.0	NA	77.0	126.0	107.0	107.5	60.0	140.0	0.5	20.0
cis-1,2-dichloroethene	5.0	ND	ND	19.9	NA	20.0	ND	19.5	20.4	20.0	99.5	NA	69.0	130.0	97.5	102.0	60.0	140.0	4.5	20.0
chloroform	5.0	ND	ND	19.5	NA	20.0	ND	19.8	20.3	20.0	97.5	NA	83.0	121.0	99.0	101.5	51.0	138.0	2.5	20.0

Notes and Definitions:

RDL = Reporting Detection Limit
BLK = Method Blank
BLK2 = Second Method Blank
LCS = Laboratory Control Sample
LCS2 = Second Laboratory Control Sample
SMPL = Sample Results
MS/MSD = Matrix Spike / Matrix Spike Duplicate
LCL = Lower Control Limit
UCL = Upper Control Limit
RPD = Relative Percent Difference

ND = Not Detected
NA = Not Applicable

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49821	Run Date:	11/25/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_9	SMPL Num:	11-331-05	SMPL DF:	1
Matrix:	Water	BLK FLNM:	9BK00425	SMPL FLNM:	9AM00428	MS DF:	1
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	9AM00429	MSD DF:	1
		LCS FLNM:	9QC00426	MSD FLNM:	9AM00430		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
bromochloromethane	5.0	ND	ND	20.7	NA	20.0	ND	20.4	20.7	20.0	103.5	NA	85.0	118.0	102.0	103.5	60.0	140.0	1.5	20.0
1,1,1-trichloroethane	5.0	ND	ND	19.5	NA	20.0	ND	19.8	19.9	20.0	97.5	NA	74.0	125.0	99.0	99.5	52.0	162.0	0.5	20.0
1,1-dichloropropene	5.0	ND	ND	21.7	NA	20.0	ND	21.7	21.8	20.0	108.5	NA	85.0	126.0	108.5	109.0	60.0	140.0	0.5	20.0
carbon tetrachloride	5.0	ND	ND	20.7	NA	20.0	ND	20.7	20.7	20.0	103.5	NA	73.0	129.0	103.5	103.5	70.0	140.0	0.0	20.0
1,2-dichloroethane	5.0	ND	ND	19.9	NA	20.0	ND	19.9	20.2	20.0	99.5	NA	76.0	123.0	99.5	101.0	49.0	155.0	1.5	20.0
benzene	5.0	ND	ND	20.6	NA	20.0	ND	20.4	20.1	20.0	103.0	NA	86.0	118.0	102.0	100.5	37.0	151.0	1.5	20.0
trichloroethene	5.0	ND	ND	20.1	NA	20.0	ND	20.2	20.0	20.0	100.5	NA	82.0	120.0	101.0	100.0	71.0	157.0	1.0	20.0
1,2-dichloropropane	5.0	ND	ND	20.4	NA	20.0	ND	20.1	19.9	20.0	102.0	NA	74.0	126.0	100.5	99.5	D	210.0	1.0	20.0
bromodichloromethane	5.0	ND	ND	20.5	NA	20.0	ND	20.4	20.5	20.0	102.5	NA	74.0	126.0	102.0	102.5	35.0	155.0	0.5	20.0
dibromomethane	5.0	ND	ND	20.4	NA	20.0	ND	20.4	20.5	20.0	102.0	NA	78.0	125.0	102.0	102.5	60.0	140.0	0.5	20.0
2-chloroethylvinyl-ether	10.0	ND	ND	18.1	NA	20.0	ND	ND	ND	20.0	90.5	NA	50.0	151.0	NA	NA	70.0	130.0	NA	20.0
4-methyl-2-pentanone	10.0	ND	ND	21.0	NA	20.0	ND	18.2	17.9	20.0	105.0	NA	79.0	127.0	91.0	89.5	70.0	130.0	1.7	20.0
cis-1,3-dichloropropene	5.0	ND	ND	21.6	NA	20.0	ND	21.7	21.3	20.0	108.0	NA	77.0	123.0	108.5	106.5	D	227.0	1.9	20.0
toluene	5.0	ND	ND	20.4	NA	20.0	ND	20.0	20.4	20.0	102.0	NA	83.0	119.0	100.0	102.0	47.0	150.0	2.0	20.0
trans-1,3-dichloropropene	5.0	ND	ND	19.9	NA	20.0	ND	19.3	19.7	20.0	99.5	NA	74.0	124.0	96.5	98.5	17.0	183.0	2.1	20.0
1,1,2-trichloroethane	5.0	ND	ND	19.8	NA	20.0	ND	18.6	19.5	20.0	99.0	NA	72.0	119.0	93.0	97.5	52.0	150.0	4.7	20.0
2-hexanone	10.0	ND	ND	19.7	NA	20.0	ND	18.5	18.5	20.0	98.5	NA	55.0	114.0	92.5	92.5	70.0	130.0	0.0	20.0
1,3-dichloropropane	5.0	ND	ND	19.4	NA	20.0	ND	18.7	19.7	20.0	97.0	NA	73.0	122.0	93.5	98.5	60.0	140.0	5.2	20.0
tetrachloroethene	5.0	ND	ND	20.0	NA	20.0	ND	18.8	20.2	20.0	100.0	NA	82.0	120.0	94.0	101.0	64.0	148.0	7.2	20.0
dibromochloromethane	5.0	ND	ND	20.3	NA	20.0	ND	19.8	20.3	20.0	101.5	NA	72.0	121.0	99.0	101.5	53.0	149.0	2.5	20.0

Notes and Definitions:

RDL = Reporting Detection Limit
BLK = Method Blank
BLK2 = Second Method Blank
LCS = Laboratory Control Sample
LCS2 = Second Laboratory Control Sample
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MS/MSD = Matrix Spike / Matrix Spike Duplicate
LCL = Lower Control Limit
UCL = Upper Control Limit
RPD = Relative Percent Difference

ND = Not Detected
NA = Not Applicable

KEM[illegible]N ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49821	Run Date:	11/25/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_9	SMPL Num:	11-331-05	SMPL DF:	1
Matrix:	Water	BLK FLNM:	9BK00425	SMPL FLNM:	9AM00428	MS DF:	1
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	9AM00429	MSD DF:	1
		LCS FLNM:	9QC00426	MSD FLNM:	9AM00430		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
1,2-dibromoethane	5.0	ND	ND	20.0	NA	20.0	ND	19.3	19.4	20.0	100.0	NA	75.0	121.0	96.5	97.0	60.0	140.0	0.5	20.0
chlorobenzene	5.0	ND	ND	20.2	NA	20.0	ND	19.9	20.0	20.0	101.0	NA	83.0	120.0	99.5	100.0	37.0	160.0	0.5	20.0
1,1,1,2-tetrachloroethane	5.0	ND	ND	19.5	NA	20.0	ND	19.1	19.8	20.0	97.5	NA	79.0	118.0	95.5	99.0	60.0	140.0	3.6	20.0
ethylbenzene	5.0	ND	ND	20.0	NA	20.0	ND	19.6	19.8	20.0	100.0	NA	82.0	119.0	98.0	99.0	37.0	162.0	1.0	20.0
m+p-xylene	5.0	ND	ND	41.9	NA	40.0	ND	40.0	39.8	40.0	104.8	NA	81.0	121.0	100.0	99.5	60.0	140.0	0.5	20.0
o-xylene	5.0	ND	ND	21.8	NA	20.0	ND	20.8	20.8	20.0	109.0	NA	81.0	199.0	104.0	104.0	60.0	140.0	0.0	20.0
styrene	5.0	ND	ND	22.3	NA	20.0	ND	21.2	21.1	20.0	111.5	NA	81.0	118.0	106.0	105.5	60.0	140.0	0.5	20.0
bromoform	5.0	ND	ND	20.8	NA	20.0	ND	18.8	19.7	20.0	104.0	NA	68.0	129.0	94.0	98.5	45.0	169.0	4.7	20.0
isopropylbenzene	5.0	ND	ND	21.6	NA	20.0	ND	20.6	20.5	20.0	108.0	NA	81.0	121.0	103.0	102.5	60.0	140.0	0.5	20.0
1,1,2,2-tetrachloroethane	5.0	ND	ND	21.4	NA	20.0	ND	20.2	20.9	20.0	107.0	NA	61.0	137.0	101.0	104.5	46.0	157.0	3.4	20.0
1,2,3-trichloropropane	5.0	ND	ND	20.2	NA	20.0	ND	19.0	20.0	20.0	101.0	NA	72.0	130.0	95.0	100.0	60.0	140.0	5.1	20.0
trans-1,4-dichloro-2-butene	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	20.0
propyl-benzene	5.0	ND	ND	20.8	NA	20.0	ND	19.7	20.4	20.0	104.0	NA	69.0	135.0	98.5	102.0	60.0	140.0	3.5	20.0
bromobenzene	5.0	ND	ND	20.1	NA	20.0	ND	19.8	20.0	20.0	100.5	NA	86.0	118.0	99.0	100.0	60.0	140.0	1.0	20.0
1,3,5-trimethylbenzene	5.0	ND	ND	20.7	NA	20.0	ND	19.9	20.6	20.0	103.5	NA	83.0	121.0	99.5	103.0	60.0	140.0	3.5	20.0
2-chlorotoluene	5.0	ND	ND	20.8	NA	20.0	ND	19.1	21.0	20.0	104.0	NA	80.0	126.0	95.5	105.0	60.0	140.0	9.5	20.0
4-chlorotoluene	5.0	ND	ND	20.7	NA	20.0	ND	20.9	19.6	20.0	103.5	NA	80.0	125.0	104.5	98.0	60.0	140.0	6.4	20.0
tert-butyl-benzene	5.0	ND	ND	20.5	NA	20.0	ND	19.6	20.0	20.0	102.5	NA	79.0	114.0	98.0	100.0	60.0	140.0	2.0	20.0
1,2,4-trimethylbenzene	5.0	ND	ND	20.6	NA	20.0	ND	19.9	20.3	20.0	103.0	NA	84.0	121.0	99.5	101.5	60.0	140.0	2.0	20.0
sec-butyl-benzene	5.0	ND	ND	20.0	NA	20.0	ND	18.9	19.5	20.0	100.0	NA	81.0	122.0	94.5	97.5	60.0	140.0	3.1	20.0

Notes and Definitions:

RDL = Reporting Detection Limit
BLK = Method Blank
BLK2 = Second Method Blank
LCS = Laboratory Control Sample
LCS2 = Second Laboratory Control Sample
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MS/MSD = Matrix Spike / Matrix Spike Duplicate
LCL = Lower Control Limit
UCL = Upper Control Limit
RPD = Relative Percent Difference

ND = Not Detected
NA = Not Applicable

KEMRON ENVIRONMENTAL SERVICES - OVL
VOLATILE QUALITY CONTROL SUMMARY

Workgroup #:	WG49821	Run Date:	11/25/98	LCS2 FLNM:	NA	LCS DF:	1
Method:	8260A	Instrument ID:	HPMS_9	SMPL Num:	11-331-05	SMPL DF:	1
Matrix:	Water	BLK FLNM:	9BK00425	SMPL FLNM:	9AM00428	MS DF:	1
Units:	ug/L	BLK2 FLNM:	NA	MS FLNM:	9AM00429	MSD DF:	1
		LCS FLNM:	9QC00426	MSD FLNM:	9AM00430		

		CONCENTRATION, PPB									PERCENT RECOVERY								PERCENT RPD	
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
p-isopropyl-toluene	5.0	ND	ND	20.0	NA	20.0	ND	19.1	19.6	20.0	100.0	NA	80.0	119.0	95.5	98.0	60.0	140.0	2.6	20.0
1,3-dichlorobenzene	5.0	ND	ND	19.9	NA	20.0	ND	19.1	19.8	20.0	99.5	NA	85.0	119.0	95.5	99.0	60.0	140.0	3.6	20.0
1,4-dichlorobenzene	5.0	ND	ND	19.6	NA	20.0	ND	19.0	19.2	20.0	98.0	NA	82.0	122.0	95.0	96.0	18.0	190.0	1.0	20.0
n-butyl-benzene	5.0	ND	ND	19.9	NA	20.0	ND	18.7	19.2	20.0	99.5	NA	80.0	125.0	93.5	96.0	60.0	140.0	2.6	20.0
1,2-dichlorobenzene	5.0	ND	ND	20.5	NA	20.0	ND	19.8	20.4	20.0	102.5	NA	86.0	119.0	99.0	102.0	19.0	190.0	3.0	20.0
1,2-dibromo-3-chloropropane	5.0	ND	ND	19.1	NA	20.0	ND	17.7	17.8	20.0	95.5	NA	66.0	134.0	88.5	89.0	60.0	140.0	0.6	20.0
1,2,4-trichlorobenzene	5.0	ND	ND	19.2	NA	20.0	ND	18.1	18.4	20.0	96.0	NA	78.0	122.0	90.5	92.0	60.0	140.0	1.6	20.0
hexachlorobutadiene	5.0	ND	ND	17.1	NA	20.0	ND	15.4	16.5	20.0	85.5	NA	73.0	125.0	77.0	82.5	60.0	140.0	6.9	20.0
napthalene	10.0	ND	ND	19.1	NA	20.0	ND	17.4	17.9	20.0	95.5	NA	74.0	148.0	87.0	89.5	60.0	140.0	2.8	20.0
1,2,3-trichlorobenzene	5.0	ND	ND	18.9	NA	20.0	ND	17.5	18.1	20.0	94.5	NA	74.0	124.0	87.5	90.5	60.0	140.0	3.4	20.0

BLK2 = *Second Method Blank*
LCS = Laboratory Control Sample
LCS2 = Second Laboratory Control Sample
SMPL = Sample Results
MS/MSD = Matrix Spike / Matrix Spike Duplicate
LCL = Lower Control Limit
UCL = Upper Control Limit
RPD = Relative Percent Difference

ND = Not Detected
NA = Not Applicable
RDL = Reporting Detection Limit
BLK = Method Blank

SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP : WG49720
METHOD : 8270
MATRIX : WATER
CONCENTRATION UNITS : UG/L
PREP WORK GRP : WG49659

EXT DATE : 11/23/98
BENCH SHEET : V105P50
BLK FLNM : 8769.D*
LCS FLNM: 8770.D*

RUN DATE : 11/23/98
SMPL ID : L9811381-01
SMPL FLNM : 8774.D*
MS FLNM : 8775.D*
MSD FLNM : 8776.D*

INSTRUMENT : HPMS5
ANALYST : mdc

ANALYTE	CONCENTRATION, ug/L								PERCENT RECOVERY, %									PERCENT			BEYOND LIMITS				
	RDL	BLANK	LCS SPIKE ADDED	LCS	SAMPLE	MS SPIKE ADDED	MS	MSD	BLANK	LCS	LCS LCL	LCS UCL	SAMPLE	MS	MSD	MS LCL	MS UCL	MSD RPD	RPD UCL	RPD > LIMIT	SAMPLE	BLANK	LCS	MS	MSD
PYRIDINE	5.0	ND	100	21.5	ND	200	56.0	54.2	NA	21.5	5	150	NA	28.0	27.1	5	150	3	40						
N-NITROSODIMETHYLAMINE	5.0	ND	100	30.8	ND	200	63.2	56.4	NA	30.8	5	150	NA	31.6	28.2	5	150	11	40						
ANILINE	10.0	ND	100	39.9	ND	200	80.9	76.2	NA	39.9	5	150	NA	40.5	38.1	5	150	6	40						
PHENOL	5.0	ND	100	25.1	ND	200	53.5	44.5	NA	25.1	5	112	NA	26.7	22.3	5	112	18	40						
BIS(2-CHLOROETHYL)ETHER	5.0	ND	100	53.3	ND	200	96.2	93.5	NA	53.3	12	158	NA	48.1	46.7	12	158	3	40						
2-CHLOROPHENOL	5.0	ND	100	50.5	ND	200	100.6	85.4	NA	50.5	23	134	NA	50.3	42.7	23	134	16	40						
1,3-DICHLOROBENZENE	5.0	ND	100	44.3	ND	200	89.0	78.8	NA	44.3	5	172	NA	44.5	39.4	5	172	12	40						
1,4-DICHLOROBENZENE	10.0	ND	100	46.6	ND	200	93.9	82.8	NA	46.6	20	124	NA	47.0	41.4	20	124	13	40						
BENZYL ALCOHOL	5.0	ND	100	46.4	ND	200	89.4	78.7	NA	46.4	5	150	NA	44.7	39.4	5	150	13	40						
1,2-DICHLOROBENZENE	5.0	ND	100	46.5	ND	200	93.5	81.9	NA	46.5	32	129	NA	46.7	41.0	32	129	13	40						
2-METHYLPHENOL	5.0	ND	100	54.1	ND	200	103.0	86.5	NA	54.1	5	150	NA	51.5	43.2	5	150	17	40						
BIS(2-CHLOROISOPROPYL)ETH	5.0	ND	100	51.3	ND	200	103.1	86.4	NA	51.3	36	166	NA	51.5	43.2	36	166	18	40						
3- & 4-METHYLPHENOL	5.0	ND	100	50.6	ND	200	98.2	81.8	NA	50.6	5	150	NA	49.1	40.9	5	150	18	40						
N-NITROSO-DI-N-PROPYLAMIN	5.0	ND	100	56.3	ND	200	108.9	91.8	NA	56.3	5	230	NA	54.5	45.9	5	230	17	40						
HEXACHLOROETHANE	5.0	ND	100	45.5	ND	200	85.8	75.2	NA	45.5	40	113	NA	42.9	37.6	40	113	13	40						L
NITROBENZENE	5.0	ND	100	50.9	ND	200	102.9	88.3	NA	50.9	35	180	NA	51.4	44.2	35	180	15	40						
ISOPHORONE	5.0	ND	100	64.1	ND	200	120.9	103.4	NA	64.1	21	196	NA	60.4	51.7	21	196	16	40						
2-NITROPHENOL	5.0	ND	100	57.9	ND	200	114.0	96.9	NA	57.9	29	182	NA	57.0	48.4	29	182	16	40						
2,4-DIMETHYLPHENOL	5.0	ND	100	68.5	ND	200	117.2	98.9	NA	68.5	32	119	NA	58.6	49.4	32	119	17	40						
BIS(2-CHLOROETHOXY)METHA	25.0	ND	100	53.1	ND	200	103.0	88.8	NA	53.1	33	184	NA	51.5	43.4	33	184	17	40						
BENZOIC ACID	5.0	ND	100	7.2	ND	200	43.9	49.3	NA	7.2	5	150	NA	21.9	24.7	5	150	12	40						
2,4-DICHLOROPHENOL	5.0	ND	100	64.9	ND	200	121.1	102.2	NA	64.9	39	135	NA	60.5	51.1	39	135	17	40						
1,2,4-TRICHLOROBENZENE	5.0	ND	100	50.0	ND	200	99.2	84.7	NA	50.0	44	142	NA	49.6	42.3	44	142	16	40						L
NAPHTHALENE	5.0	ND	100	56.6	ND	200	112.3	96.8	NA	56.6	21	133	NA	56.1	48.4	21	133	15	40						
4-CHLOROANILINE	5.0	ND	100	62.2	ND	200	97.8	104.7	NA	62.2	5	150	NA	48.9	52.4	5	150	7	40						
HEXACHLOROBUTADIENE	10.0	ND	100	54.8	ND	200	109.1	93.8	NA	54.8	24	116	NA	54.5	46.9	24	116	15	40						
4-CHLORO-3-METHYLPHENOL	5.0	ND	100	77.9	ND	200	165.1	145.8	NA	77.9	22	147	NA	82.5	72.9	22	147	12	40						
2-METHYLNAPHTHALENE	5.0	ND	100	59.7	ND	200	112.4	97.7	NA	59.7	5	150	NA	56.2	48.8	5	150	14	40						
HEXACHLOROCYCLOPENTADI	5.0	ND	100	9.7	ND	200	17.5	14.8	NA	9.7	5	150	NA	8.8	7.4	5	150	17	40						
2,4,6-TRICHLOROPHENOL	25.0	ND	100	75.0	ND	200	153.9	132.0	NA	75.0	37	144	NA	76.9	66.0	37	144	15	40						
2,4,5-TRICHLOROPHENOL	5.0	ND	100	82.7	ND	200	176.2	154.3	NA	82.7	5	150	NA	88.1	77.1	5	150	13	40						
2-CHLORONAPHTHALENE	25.0	ND	100	63.1	ND	200	117.1	99.7	NA	63.1	60	118	NA	58.5	49.9	60	118	16	40				L	L
2-NITROANILINE	5.0	ND	100	80.8	ND	200	176.0	157.5	NA	80.8	5	150	NA	88.0	78.8	5	150	11	40						
DIMETHYLPHTHALATE	5.0	ND	100	79.6	ND	200	175.6	156.8	NA	79.6	5	112	NA	87.8	78.4	5	112	11	40						
ACENAPHTHYLENE	5.0	ND	100	74.1	ND	200	146.5	125.5	NA	74.1	33	145	NA	73.3	62.8	33	145	15	40						
2,6-DINITROTOLUENE	5.0	ND	100	74.5	ND	200	164.4	147.7	NA	74.5	50	158	NA	82.2	73.8	50	158	11	40						
3-NITROANILINE	25.0	ND	100	81.3	ND	200	143.5	131.5	NA	81.3	5	150	NA	71.8	65.8	5	150	9	40						
ACENAPHTHENE	5.0	ND	100	74.1	ND	200	151.6	131.6	NA	74.1	47	145	NA	75.8	65.8	47	145	14	40						
2,4-DINITROPHENOL	25.0	ND	100	65.8	ND	200	195.2	179.7	NA	65.8	5	191	NA	97.6	89.9	5	191	8	40						
4-NITROPHENOL	25.0	ND	100	42.6	ND	200	110.2	94.3	NA	42.6	5	132	NA	55.1	47.2	5	132	15	40						
DIBENZOFURAN	5.0	ND	100	74.9	ND	200	154.5	135.4	NA	74.9	5	150	NA	77.3	67.7	5	150	13	40						
2,4-DINITROTOLUENE	5.0	ND	100	86.9	ND	200	191.3	171.7	NA	86.9	39	139	NA	95.7	85.9	39	139	11	40						

NOTES & DEFINITIONS :
NA = NOT APPLICABLE
ND = NOT DETECTED
RDL=REPORTING DETECTION LIMIT

NS = NOT SPIKED
L= below QC limit
H=above QC limit

ENVIRONMENTAL SERVICES

CHAIN-OF-CUSTODY RECORD

94390

Page 1 of 1

Project Contact: Willy Burton

Turn Around Requirements:

Project No.: 4119-007

Project Name: PACOF Pedrick town

Sampler (print): Kingbiel

Signature: Erin Kingbiel

Sample I.D. No.	Comp*	Grab	Date	Time	Protocol CWA	Protocol SW846	NUMBER OF SAMPLES	Hold	Pest/PCB	SVOC	VOC	TSS	ADDITIONAL REQUIREMENTS
WEIR 1119		✓	11/19/98	1100			2			1	1		
WEIR 1119	✓		11/19/98	1100			2		1			1	
Mix 1119		✓	11/19/98	1200			4		1	1	1	1	
WIER 1117			11/17	1100								1	add per client
WICR 1118			11/18	1100								1	(bw) 11/20

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Erin Kingbiel	11/19/98	1500					

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:
			Brenda Gregory	11/20/98	1015	C of C Dated Sig intact / Cooler Temp 6.0 (bg)

*Homogenize all composite samples prior to analysis

White – Lab Yellow – Office Pink – Field

Work Order C98113760 Client Versar #of Samples 5 Due Date 12/4 Page 1

Sample #	Analyses	Reason	Removed By ADT	Removed From	Moved To	Reliq. By	Ret'd by ADT	Ret'd To	Rec'd By	Reason
1,3	8260	anal	CMS 11/20/98 @1520	V-1	VOA	BIG	JH 11/16/98 @1430	archive	BIG	Archive
1,3	8270	EXT	AH 11/23/98 @0800	walk-in	E-1B	NS	SMW 11/21/98 @0800	dumpster	NS	disposal
2-4	TSS	Anal	DLN 11/23/98 @1500	Walk-in	Lab	NS	DLN 11/23/98 @1500	Archive	NS	Archive
2,3	8015M/RCB	EXT	AH 11/23/98 @0800	walk-in	E-1B	NS	SMW 11/21/98 @0800	dumpster	NS	Disposal

KEMRON Environmental Services
109 State Park
Marietta, Ohio 45750
Phone: (740) 373-4071

Versar, Inc.
9200 Rumsey Road
Columbia, MD 21045-1934

Attention: William Burton

PO Number:
Account Number: VERSAR-MD-331

Login #: L9812010
Report Date: 12/09/98
Work ID: PEDRICKTOWN
Date Received: 12/01/98

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9812010-01	WEIR 1124	L9812010-02	BG1116
L9812010-03	BG1119	L9812010-04	EB112598
L9812010-05	WEIR112498	L9812010-06	WEIR1123
L9812010-07	WEIR1122	L9812010-08	WEIR1121
L9812010-09	WEIR1120	L9812010-10	WEIR1119

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

Dennis S. Tepe

Certified By
Dennis S. Tepe

KEMRON
ENVIRONMENTAL SERVICES

Order #98-12-010
December 9, 1998
13:54

KEMRON ENVIRONMENTAL SERVICES
REPORT NARRATIVE

Samples BG1116 and BG1119 were received after the seven day holding time for extraction had expired.

Several of the samples submitted for TSS analysis were received after the seven day holding time had expired.

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9812010-01
Client Sample ID: WEIR 1124
Site/Work ID: PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/24/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 12/01/98
Analysis Date: 12/02/98 Time: 16:47

Instrument: HP10
Analyst: CDB
Lab File ID: 008F0101

Method: 8082/3550
Run ID: R57159
Batch : WG49924

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	1.0	1
11096-82-5	Aroclor-1260	ug/L		ND	1.0	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	53.5	(13 - 154%)
Decachlorobiphenyl	50.5	(25 - 140%)

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9812010-01
Client Sample ID: WEIR 1124
Site/Work ID: PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/24/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 12/01/98
Analysis Date: 12/05/98 Time:

Instrument: HP9
Analyst: ECL
Lab File ID: 1524

Method: 8081A\3510C
Run ID: R57178
Batch : WG50057

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L		ND	0.05	1
319-85-7	beta-BHC	ug/L		ND	0.05	1
319-86-8	delta-BHC	ug/L		ND	0.05	1
76-44-8	Heptachlor	ug/L		ND	0.05	1
309-00-2	Aldrin	ug/L		ND	0.05	1
1024-57-3	Heptachlor epoxide	ug/L		ND	0.05	1
959-98-8	Endosulfan I	ug/L		ND	0.05	1

RL = Reporting Limit

Login #L9812010
December 9, 1998 04:45 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9812010-01
Client Sample ID: WEIR 1124
Site/Work ID: PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/24/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 12/01/98
Analysis Date: 12/05/98 Time:

Instrument: HP9
Analyst: ECL
Lab File ID: 1524

Method: 8081A\3510C
Run ID: R57178
Batch : WG50057

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
60-57-1	Dieldrin	ug/L		ND	0.10	1
72-55-9	4,4'-DDE	ug/L		ND	0.10	1
72-20-8	Endrin	ug/L		ND	0.10	1
33213-65-9	Endosulfan II	ug/L		ND	0.10	1
72-54-8	4,4'-DDD	ug/L		ND	0.10	1
1031-07-8	Endosulfan sulfate	ug/L		ND	0.10	1
50-29-3	4,4'-DDT	ug/L		ND	0.10	1
72-43-5	Methoxychlor	ug/L		ND	0.50	1
53494-70-5	Endrin ketone	ug/L		ND	0.10	1
7421-93-4	Endrin aldehyde	ug/L		ND	0.10	1
5103-71-9	alpha Chlordane	ug/L		ND	0.05	1
5103-74-2	gamma Chlordane	ug/L		ND	0.05	1
8001-35-2	Toxaphene	ug/L		ND	1.0	1
	gamma-BHC (Lindane)	ug/L		ND	0.05	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	47.1	(13 - 154%)
Decachlorobiphenyl	56.0	(25 - 140%)

RL = Reporting Limit

KEMRON ENVIRON[illegible]TAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9812010-01
Client Sample ID: WEIR 1124
Site/Work ID: PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/24/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 12/02/98
Analysis Date: 12/04/98 Time: 17:12

Instrument: HPMS7
Analyst: MLS
Lab File ID: 6491

Method: 8270C\3510C
Run ID: R57120
Batch : WG49979

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L		ND	10	2
111-44-4	Bis(2-Chloroethyl)ether	ug/L		ND	10	2
95-57-8	2-Chlorophenol	ug/L		ND	10	2
541-73-1	1,3-Dichlorobenzene	ug/L		ND	10	2
106-46-7	1,4-Dichlorobenzene	ug/L		ND	10	2
95-50-1	1,2-Dichlorobenzene	ug/L		ND	10	2
95-48-7	2-Methylphenol	ug/L		ND	10	2
108-60-1	bis(2-Chloroisopropyl)ether	ug/L		ND	10	2
106-44-5	4-Methylphenol	ug/L		ND	10	2
621-64-7	N-Nitroso-di-n-propylamine	ug/L		ND	10	2
67-72-1	Hexachloroethane	ug/L		ND	10	2
98-95-3	Nitrobenzene	ug/L		ND	10	2
78-59-1	Isophorone	ug/L		ND	10	2
88-75-5	2-Nitrophenol	ug/L		ND	10	2
105-67-9	2,4-Dimethylphenol	ug/L		ND	10	2
111-91-1	Bis(2-Chloroethoxy)Methane	ug/L		ND	10	2
120-83-2	2,4-Dichlorophenol	ug/L		ND	10	2
120-82-1	1,2,4-Trichlorobenzene	ug/L		ND	10	2
91-20-3	Naphthalene	ug/L		ND	10	2
106-47-8	4-Chloroaniline	ug/L		ND	10	2
87-68-3	Hexachlorobutadiene	ug/L		ND	10	2
59-50-7	4-Chloro-3-methylphenol	ug/L		ND	10	2
91-57-6	2-Methylnaphthalene	ug/L		ND	10	2
77-47-4	Hexachlorocyclopentadiene	ug/L		ND	10	2
88-06-2	2,4,6-Trichlorophenol	ug/L		ND	10	2
95-95-4	2,4,5-Trichlorophenol	ug/L		ND	50	2
91-58-7	2-Chloronaphthalene	ug/L		ND	10	2
88-74-4	2-Nitroaniline	ug/L		ND	50	2
131-11-3	Dimethylphthalate	ug/L		ND	10	2
208-96-8	Acenaphthylene	ug/L		ND	10	2
606-20-2	2,6-Dinitrotoluene	ug/L		ND	10	2
99-09-2	3-Nitroaniline	ug/L		ND	50	2
83-32-9	Acenaphthene	ug/L		ND	10	2
51-28-5	2,4-Dinitrophenol	ug/L		ND	50	2
100-02-7	4-Nitrophenol	ug/L		ND	50	2
132-64-9	Dibenzofuran	ug/L		ND	10	2
121-14-2	2,4-Dinitrotoluene	ug/L		ND	10	2
84-66-2	Diethylphthalate	ug/L		ND	10	2
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L		ND	10	2

RL = Reporting Limit

Login #L9812010
December 9, 1998 04:45 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9812010-01
Client Sample ID: WEIR 1124
Site/Work ID: PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/24/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 12/02/98
Analysis Date: 12/04/98 Time: 17:12

Instrument: HPMS7
Analyst: MLS
Lab File ID: 6491

Method: 8270C\3510C
Run ID: R57120
Batch : WG49979

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L		ND	10	2
100-01-6	4-Nitroaniline	ug/L		ND	50	2
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	50	2
86-30-6	N-Nitrosodiphenylamine	ug/L		ND	10	2
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	10	2
118-74-1	Hexachlorobenzene	ug/L		ND	10	2
87-86-5	Pentachlorophenol	ug/L		ND	50	2
85-01-8	Phenanthrene	ug/L		ND	10	2
120-12-7	Anthracene	ug/L		ND	10	2
86-74-8	Carbazole	ug/L		ND	10	2
84-74-2	Di-N-Butylphthalate	ug/L		ND	10	2
206-44-0	Fluoranthene	ug/L		ND	10	2
129-00-0	Pyrene	ug/L		ND	10	2
85-68-7	Butylbenzylphthalate	ug/L		ND	10	2
91-94-1	3,3'-Dichlorobenzidine	ug/L		ND	20	2
56-55-3	Benzo(a)anthracene	ug/L		ND	10	2
218-01-9	Chrysene	ug/L		ND	10	2
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	10	2
117-84-0	Di-n-octylphthalate	ug/L		ND	10	2
205-99-2	Benzo(b)fluoranthene	ug/L		ND	10	2
207-08-9	Benzo(k)fluoranthene	ug/L		ND	10	2
50-32-8	Benzo(a)pyrene	ug/L		ND	10	2
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L		ND	10	2
53-70-3	Dibenzo(a,h)Anthracene	ug/L		ND	10	2
191-24-2	Benzo(g,h,i)Perylene	ug/L		ND	10	2

SURROGATES- In Percent Recovery:

2-Fluorophenol	43.7	(21 - 100%)
Phenol-d5	29.3	(10 - 94%)
Nitrobenzene-d5	63.2	(35 - 114%)
2-Fluorobiphenyl	69.5	(43 - 116%)
2,4,6-Tribromophenol	112	(10 - 123%)
p-Terphenyl-d14	108	(33 - 141%)

RL = Reporting Limit

KEMRON ENVIRO[illegible]NTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9812010-01
Client Sample ID: WEIR 1124
Site/Work ID: PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/24/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 12/03/98 Time: 13:11

Instrument: HPMS8
Analyst: JLH
Lab File ID: 8-5571

Method: 8260B
Run ID: R57170
Batch : WG49967

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/L		ND	10	1
74-83-9	Bromomethane	ug/L		ND	10	1
75-01-4	Vinyl chloride	ug/L		ND	10	1
75-00-3	Chloroethane	ug/L		ND	10	1
75-09-2	Methylene chloride	ug/L		ND	5.0	1
67-64-1	Acetone	ug/L	11		10	1
75-15-0	Carbon disulfide	ug/L		ND	5.0	1
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1
75-34-3	1,1-Dichloroethane	ug/L		ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L	0.32	J	5.0	1
67-66-3	Chloroform	ug/L		ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	1
78-93-3	2-Butanone	ug/L		ND	10	1
71-55-6	1,1,1-Trichloroethane	ug/L		ND	5.0	1
56-23-5	Carbon tetrachloride	ug/L		ND	5.0	1
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	1
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	1
79-01-6	Trichloroethene	ug/L		ND	5.0	1
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1
71-43-2	Benzene	ug/L		ND	5.0	1
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	1
75-25-2	Bromoform	ug/L		ND	5.0	1
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	1
591-78-6	2-Hexanone	ug/L		ND	10	1
127-18-4	Tetrachloroethene	ug/L		ND	5.0	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0	1
108-88-3	Toluene	ug/L		ND	5.0	1
108-90-7	Chlorobenzene	ug/L		ND	5.0	1
100-41-4	Ethyl benzene	ug/L		ND	5.0	1
100-42-5	Styrene	ug/L		ND	5.0	1
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1

SURROGATES- In Percent Recovery:

Dibromofluoromethane	108	(86 - 118%)
Toluene-d8	94.7	(88 - 110%)
p-Bromofluorobenzene	93.9	(86 - 115%)
1,2-Dichloroethane-d4	108	(80 - 120%)

RL = Reporting Limit

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9812010-02
Client Sample ID: BG1116
Site/Work ID: PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/16/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 12/01/98
Analysis Date: 12/02/98 Time: 17:23

Instrument: HP10
Analyst: CDB
Lab File ID: 009F0101

Method: 8082/3550
Run ID: R57159
Batch : WG49924

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	1.0	1
11096-82-5	Aroclor-1260	ug/L		ND	1.0	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	59.5	(13 - 154%)
Decachlorobiphenyl	77.5	(25 - 140%)

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9812010-02
Client Sample ID: BG1116
Site/Work ID: PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/16/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 12/01/98
Analysis Date: 12/05/98 Time:

Instrument: HP9
Analyst: ECL
Lab File ID: 1525

Method: 8081A\3510C
Run ID: R57178
Batch : WG50057

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L		ND	0.05	1
319-85-7	beta-BHC	ug/L		ND	0.05	1
319-86-8	delta-BHC	ug/L		ND	0.05	1
76-44-8	Heptachlor	ug/L		ND	0.05	1
309-00-2	Aldrin	ug/L		ND	0.05	1
1024-57-3	Heptachlor epoxide	ug/L		ND	0.05	1
959-98-8	Endosulfan I	ug/L		ND	0.05	1

RL = Reporting Limit

KEMRON ENVIRO[illegible]NTAL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9812010-02
Client Sample ID: BG1116
Site/Work ID: PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/16/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 12/01/98
Analysis Date: 12/05/98 Time:

Instrument: HP9
Analyst: ECL
Lab File ID: 1525

Method: 8081A\3510C
Run ID: R57178
Batch : WG50057

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
60-57-1	Dieldrin	ug/L		ND	0.10	1
72-55-9	4,4'-DDE	ug/L		ND	0.10	1
72-20-8	Endrin	ug/L		ND	0.10	1
33213-65-9	Endosulfan II	ug/L		ND	0.10	1
72-54-8	4,4'-DDD	ug/L		ND	0.10	1
1031-07-8	Endosulfan sulfate	ug/L		ND	0.10	1
50-29-3	4,4'-DDT	ug/L		ND	0.10	1
72-43-5	Methoxychlor	ug/L		ND	0.50	1
53494-70-5	Endrin ketone	ug/L		ND	0.10	1
7421-93-4	Endrin aldehyde	ug/L		ND	0.10	1
5103-71-9	alpha Chlordane	ug/L		ND	0.05	1
5103-74-2	gamma Chlordane	ug/L		ND	0.05	1
8001-35-2	Toxaphene	ug/L		ND	1.0	1
	gamma-BHC (Lindane)	ug/L		ND	0.05	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	54.5	(13 - 154%)
Decachlorobiphenyl	89.0	(25 - 140%)

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9812010-02
Client Sample ID: BG1116
Site/Work ID: PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/16/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 12/02/98
Analysis Date: 12/04/98 Time: 17:50

Instrument: HPMS7
Analyst: MLS
Lab File ID: 6492

Method: 8270C\3510C
Run ID: R57120
Batch : WG49979

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L		ND	11	2.2
111-44-4	Bis(2-Chloroethyl)ether	ug/L		ND	11	2.2
95-57-8	2-Chlorophenol	ug/L		ND	11	2.2
541-73-1	1,3-Dichlorobenzene	ug/L		ND	11	2.2
106-46-7	1,4-Dichlorobenzene	ug/L		ND	11	2.2
95-50-1	1,2-Dichlorobenzene	ug/L		ND	11	2.2
95-48-7	2-Methylphenol	ug/L		ND	11	2.2
108-60-1	bis(2-Chloroisopropyl)ether	ug/L		ND	11	2.2
106-44-5	4-Methylphenol	ug/L		ND	11	2.2
621-64-7	N-Nitroso-di-n-propylamine	ug/L		ND	11	2.2
67-72-1	Hexachloroethane	ug/L		ND	11	2.2
98-95-3	Nitrobenzene	ug/L		ND	11	2.2
78-59-1	Isophorone	ug/L		ND	11	2.2
88-75-5	2-Nitrophenol	ug/L		ND	11	2.2
105-67-9	2,4-Dimethylphenol	ug/L		ND	11	2.2
111-91-1	Bis(2-Chloroethoxy)Methane	ug/L		ND	11	2.2
120-83-2	2,4-Dichlorophenol	ug/L		ND	11	2.2
120-82-1	1,2,4-Trichlorobenzene	ug/L		ND	11	2.2
91-20-3	Naphthalene	ug/L		ND	11	2.2
106-47-8	4-Chloroaniline	ug/L		ND	11	2.2
87-68-3	Hexachlorobutadiene	ug/L		ND	11	2.2
59-50-7	4-Chloro-3-methylphenol	ug/L		ND	11	2.2
91-57-6	2-Methylnaphthalene	ug/L		ND	11	2.2
77-47-4	Hexachlorocyclopentadiene	ug/L		ND	11	2.2
88-06-2	2,4,6-Trichlorophenol	ug/L		ND	11	2.2
95-95-4	2,4,5-Trichlorophenol	ug/L		ND	55	2.2
91-58-7	2-Chloronaphthalene	ug/L		ND	11	2.2
88-74-4	2-Nitroaniline	ug/L		ND	55	2.2
131-11-3	Dimethylphthalate	ug/L		ND	11	2.2
208-96-8	Acenaphthylene	ug/L		ND	11	2.2
606-20-2	2,6-Dinitrotoluene	ug/L		ND	11	2.2
99-09-2	3-Nitroaniline	ug/L		ND	55	2.2
83-32-9	Acenaphthene	ug/L		ND	11	2.2
51-28-5	2,4-Dinitrophenol	ug/L		ND	55	2.2
100-02-7	4-Nitrophenol	ug/L		ND	55	2.2
132-64-9	Dibenzofuran	ug/L		ND	11	2.2
121-14-2	2,4-Dinitrotoluene	ug/L		ND	11	2.2
84-66-2	Diethylphthalate	ug/L		ND	11	2.2
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L		ND	11	2.2

RL = Reporting Limit

KEMRON ENVIRO[illegible]NTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9812010-02
Client Sample ID: BG1116
Site/Work ID: PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 12/02/98
Analysis Date: 12/04/98 Time: 17:50

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/16/98

Instrument: HPMS7
Analyst: MLS
Lab File ID: 6492

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8270C\3510C
Run ID: R57120
Batch : WG49979

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L		ND	11	2.2
100-01-6	4-Nitroaniline	ug/L		ND	55	2.2
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	55	2.2
86-30-6	N-Nitrosodiphenylamine	ug/L		ND	11	2.2
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	11	2.2
118-74-1	Hexachlorobenzene	ug/L		ND	11	2.2
87-86-5	Pentachlorophenol	ug/L		ND	55	2.2
85-01-8	Phenanthrene	ug/L		ND	11	2.2
120-12-7	Anthracene	ug/L		ND	11	2.2
86-74-8	Carbazole	ug/L		ND	11	2.2
84-74-2	Di-N-Butylphthalate	ug/L		ND	11	2.2
206-44-0	Fluoranthene	ug/L		ND	11	2.2
129-00-0	Pyrene	ug/L		ND	11	2.2
85-68-7	Butylbenzylphthalate	ug/L		ND	11	2.2
91-94-1	3,3'-Dichlorobenzidine	ug/L		ND	22	2.2
56-55-3	Benzo(a)anthracene	ug/L		ND	11	2.2
218-01-9	Chrysene	ug/L		ND	11	2.2
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	11	2.2
117-84-0	Di-n-octylphthalate	ug/L		ND	11	2.2
205-99-2	Benzo(b)fluoranthene	ug/L		ND	11	2.2
207-08-9	Benzo(k)fluoranthene	ug/L		ND	11	2.2
50-32-8	Benzo(a)pyrene	ug/L		ND	11	2.2
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L		ND	11	2.2
53-70-3	Dibenzo(a,h)Anthracene	ug/L		ND	11	2.2
191-24-2	Benzo(g,h,i)Perylene	ug/L		ND	11	2.2

SURROGATES- In Percent Recovery:

2-Fluorophenol	49.7	(21 - 100%)
Phenol-d5	32.8	(10 - 94%)
Nitrobenzene-d5	73.3	(35 - 114%)
2-Fluorobiphenyl	79.5	(43 - 116%)
2,4,6-Tribromophenol	117	(10 - 123%)
p-Terphenyl-d14	140	(33 - 141%)

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9812010-03
Client Sample ID: BG1119
Site/Work ID: PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/19/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 12/01/98
Analysis Date: 12/02/98 Time: 17:59

Instrument: HP10
Analyst: CDB
Lab File ID: 010F0101

Method: 8082/3550
Run ID: R57159
Batch : WG49924

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.55	1.1
11104-28-2	Aroclor-1221	ug/L		ND	0.55	1.1
11141-16-5	Aroclor-1232	ug/L		ND	0.55	1.1
53469-21-9	Aroclor-1242	ug/L		ND	0.55	1.1
12672-29-6	Aroclor-1248	ug/L		ND	0.55	1.1
11097-69-1	Aroclor-1254	ug/L		ND	1.1	1.1
11096-82-5	Aroclor-1260	ug/L		ND	1.1	1.1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	75.9	(13 - 154%)
Decachlorobiphenyl	88.6	(25 - 140%)

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9812010-03
Client Sample ID: BG1119
Site/Work ID: PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/19/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 12/01/98
Analysis Date: 12/05/98 Time:

Instrument: HP9
Analyst: ECL
Lab File ID: 1526

Method: 8081A\3510C
Run ID: R57178
Batch : WG50057

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L		ND	0.055	1.1
319-85-7	beta-BHC	ug/L		ND	0.055	1.1
319-86-8	delta-BHC	ug/L		ND	0.055	1.1
76-44-8	Heptachlor	ug/L		ND	0.055	1.1
309-00-2	Aldrin	ug/L		ND	0.055	1.1
1024-57-3	Heptachlor epoxide	ug/L		ND	0.055	1.1
959-98-8	Endosulfan I	ug/L		ND	0.055	1.1

RL = Reporting Limit

KEMRON ENVIRO[illegible]NTAL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9812010-03
Client Sample ID: BG1119
Site/Work ID: PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 12/01/98
Analysis Date: 12/05/98 Time:

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/19/98

Instrument: HP9
Analyst: ECL
Lab File ID: 1526

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8081A\3510C
Run ID: R57178
Batch : WG50057

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
60-57-1	Dieldrin	ug/L		ND	0.11	1.1
72-55-9	4,4'-DDE	ug/L		ND	0.11	1.1
72-20-8	Endrin	ug/L		ND	0.11	1.1
33213-65-9	Endosulfan II	ug/L		ND	0.11	1.1
72-54-8	4,4'-DDD	ug/L		ND	0.11	1.1
1031-07-8	Endosulfan sulfate	ug/L		ND	0.11	1.1
50-29-3	4,4'-DDT	ug/L		ND	0.11	1.1
72-43-5	Methoxychlor	ug/L		ND	0.55	1.1
53494-70-5	Endrin ketone	ug/L		ND	0.11	1.1
7421-93-4	Endrin aldehyde	ug/L		ND	0.11	1.1
5103-71-9	alpha Chlordane	ug/L		ND	0.055	1.1
5103-74-2	gamma Chlordane	ug/L		ND	0.055	1.1
8001-35-2	Toxaphene	ug/L		ND	1.1	1.1
	gamma-BHC (Lindane)	ug/L		ND	0.055	1.1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	55.7	(13 - 154%)
Decachlorobiphenyl	86.6	(25 - 140%)

RL = Reporting Limit

Login #L9812010
December 9, 1998 04:45 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9812010-03
Client Sample ID: BG1119
Site/Work ID: PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/19/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 12/02/98
Analysis Date: 12/04/98 Time: 18:28

Instrument: HPMS7
Analyst: MLS
Lab File ID: 6493

Method: 8270C\3510C
Run ID: R57120
Batch : WG49979

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L		ND	10	2
111-44-4	Bis(2-Chloroethyl)ether	ug/L		ND	10	2
95-57-8	2-Chlorophenol	ug/L		ND	10	2
541-73-1	1,3-Dichlorobenzene	ug/L		ND	10	2
106-46-7	1,4-Dichlorobenzene	ug/L		ND	10	2
95-50-1	1,2-Dichlorobenzene	ug/L		ND	10	2
95-48-7	2-Methylphenol	ug/L		ND	10	2
108-60-1	bis(2-Chloroisopropyl)ether	ug/L		ND	10	2
106-44-5	4-Methylphenol	ug/L		ND	10	2
621-64-7	N-Nitroso-di-n-propylamine	ug/L		ND	10	2
67-72-1	Hexachloroethane	ug/L		ND	10	2
98-95-3	Nitrobenzene	ug/L		ND	10	2
78-59-1	Isophorone	ug/L		ND	10	2
88-75-5	2-Nitrophenol	ug/L		ND	10	2
105-67-9	2,4-Dimethylphenol	ug/L		ND	10	2
111-91-1	Bis(2-Chloroethoxy)Methane	ug/L		ND	10	2
120-83-2	2,4-Dichlorophenol	ug/L		ND	10	2
120-82-1	1,2,4-Trichlorobenzene	ug/L		ND	10	2
91-20-3	Naphthalene	ug/L		ND	10	2
106-47-8	4-Chloroaniline	ug/L		ND	10	2
87-68-3	Hexachlorobutadiene	ug/L		ND	10	2
59-50-7	4-Chloro-3-methylphenol	ug/L		ND	10	2
91-57-6	2-Methylnaphthalene	ug/L		ND	10	2
77-47-4	Hexachlorocyclopentadiene	ug/L		ND	10	2
88-06-2	2,4,6-Trichlorophenol	ug/L		ND	10	2
95-95-4	2,4,5-Trichlorophenol	ug/L		ND	50	2
91-58-7	2-Chloronaphthalene	ug/L		ND	10	2
88-74-4	2-Nitroaniline	ug/L		ND	50	2
131-11-3	Dimethylphthalate	ug/L		ND	10	2
208-96-8	Acenaphthylene	ug/L		ND	10	2
606-20-2	2,6-Dinitrotoluene	ug/L		ND	10	2
99-09-2	3-Nitroaniline	ug/L		ND	50	2
83-32-9	Acenaphthene	ug/L		ND	10	2
51-28-5	2,4-Dinitrophenol	ug/L		ND	50	2
100-02-7	4-Nitrophenol	ug/L		ND	50	2
132-64-9	Dibenzofuran	ug/L		ND	10	2
121-14-2	2,4-Dinitrotoluene	ug/L		ND	10	2
84-66-2	Diethylphthalate	ug/L		ND	10	2
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L		ND	10	2

RL = Reporting Limit

KEMRON ENVIRO[illegible]NTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9812010-03
Client Sample ID: BG1119
Site/Work ID: PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 12/02/98
Analysis Date: 12/04/98 Time: 18:28

Dil. Type: N/A
COC Info: N/A

Date Collected: 11/19/98

Instrument: HPMS7
Analyst: MLS
Lab File ID: 6493

Sample Weight: N/A
Extract Volume: N/A

% Solid: N/A

Method: 8270C\3510C
Run ID: R57120
Batch : WG49979

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L		ND	10	2
100-01-6	4-Nitroaniline	ug/L		ND	50	2
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	50	2
86-30-6	N-Nitrosodiphenylamine	ug/L		ND	10	2
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	10	2
118-74-1	Hexachlorobenzene	ug/L		ND	10	2
87-86-5	Pentachlorophenol	ug/L		ND	50	2
85-01-8	Phenanthrene	ug/L		ND	10	2
120-12-7	Anthracene	ug/L		ND	10	2
86-74-8	Carbazole	ug/L		ND	10	2
84-74-2	Di-N-Butylphthalate	ug/L		ND	10	2
206-44-0	Fluoranthene	ug/L		ND	10	2
129-00-0	Pyrene	ug/L		ND	10	2
85-68-7	Butylbenzylphthalate	ug/L		ND	10	2
91-94-1	3,3'-Dichlorobenzidine	ug/L		ND	20	2
56-55-3	Benzo(a)anthracene	ug/L		ND	10	2
218-01-9	Chrysene	ug/L		ND	10	2
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	10	2
117-84-0	Di-n-octylphthalate	ug/L		ND	10	2
205-99-2	Benzo(b)fluoranthene	ug/L		ND	10	2
207-08-9	Benzo(k)fluoranthene	ug/L		ND	10	2
50-32-8	Benzo(a)pyrene	ug/L		ND	10	2
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L		ND	10	2
53-70-3	Dibenzo(a,h)Anthracene	ug/L		ND	10	2
191-24-2	Benzo(g,h,i)Perylene	ug/L		ND	10	2

SURROGATES- In Percent Recovery:

2-Fluorophenol	45.5	(21 - 100%)
Phenol-d5	29.4	(10 - 94%)
Nitrobenzene-d5	68.7	(35 - 114%)
2-Fluorobiphenyl	73.4	(43 - 116%)
2,4,6-Tribromophenol	109	(10 - 123%)
p-Terphenyl-d14	129	(33 - 141%)

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9812010-03
Client Sample ID: BG1119
Site/Work ID: PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/19/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 12/03/98 Time: 13:47

Instrument: HPMS8
Analyst: JLH
Lab File ID: 8-5572

Method: 8260B
Run ID: R57170
Batch : WG49967

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/L		ND	10	1
74-83-9	Bromomethane	ug/L		ND	10	1
75-01-4	Vinyl chloride	ug/L		ND	10	1
75-00-3	Chloroethane	ug/L		ND	10	1
75-09-2	Methylene chloride	ug/L		ND	5.0	1
67-64-1	Acetone	ug/L		ND	10	1
75-15-0	Carbon disulfide	ug/L		ND	5.0	1
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1
75-34-3	1,1-Dichloroethane	ug/L		ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L		ND	5.0	1
67-66-3	Chloroform	ug/L		ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	1
78-93-3	2-Butanone	ug/L		ND	10	1
71-55-6	1,1,1-Trichloroethane	ug/L		ND	5.0	1
56-23-5	Carbon tetrachloride	ug/L		ND	5.0	1
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	1
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	1
79-01-6	Trichloroethene	ug/L		ND	5.0	1
124-48-1	Dibromochloromethane	ug/L	0.34	J	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1
71-43-2	Benzene	ug/L		ND	5.0	1
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	1
75-25-2	Bromoform	ug/L	1.3	J	5.0	1
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	1
591-78-6	2-Hexanone	ug/L		ND	10	1
127-18-4	Tetrachloroethene	ug/L		ND	5.0	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0	1
108-88-3	Toluene	ug/L		ND	5.0	1
108-90-7	Chlorobenzene	ug/L		ND	5.0	1
100-41-4	Ethyl benzene	ug/L		ND	5.0	1
100-42-5	Styrene	ug/L		ND	5.0	1
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1

SURROGATES- In Percent Recovery:

Dibromofluoromethane	106	(86 - 118%)
Toluene-d8	94.6	(88 - 110%)
p-Bromofluorobenzene	94.7	(86 - 115%)
1,2-Dichloroethane-d4	106	(80 - 120%)

RL = Reporting Limit

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9812010-04
Client Sample ID: EB112598
Site/Work ID: PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 12/01/98
Analysis Date: 12/02/98 Time: 18:34

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/25/98
Instrument: HP10
Analyst: CDB
Lab File ID: 011F0101

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A
Method: 8082/3550
Run ID: R57159
Batch : WG49924

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2	Aroclor-1016	ug/L		ND	0.50	1
11104-28-2	Aroclor-1221	ug/L		ND	0.50	1
11141-16-5	Aroclor-1232	ug/L		ND	0.50	1
53469-21-9	Aroclor-1242	ug/L		ND	0.50	1
12672-29-6	Aroclor-1248	ug/L		ND	0.50	1
11097-69-1	Aroclor-1254	ug/L		ND	1.0	1
11096-82-5	Aroclor-1260	ug/L		ND	1.0	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	70.0	(13 - 154%)
Decachlorobiphenyl	61.5	(25 - 140%)

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9812010-04
Client Sample ID: EB112598
Site/Work ID: PEDRICKTOWN
Matrix: Water

TCLP Extract Date: N/A
Extract Date: 12/01/98
Analysis Date: 12/05/98 Time:

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/25/98
Instrument: HP9
Analyst: ECL
Lab File ID: 1527

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A
Method: 8081A\3510C
Run ID: R57178
Batch : WG50057

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L		ND	0.05	1
319-85-7	beta-BHC	ug/L		ND	0.05	1
319-86-8	delta-BHC	ug/L		ND	0.05	1
76-44-8	Heptachlor	ug/L		ND	0.05	1
309-00-2	Aldrin	ug/L		ND	0.05	1
1024-57-3	Heptachlor epoxide	ug/L		ND	0.05	1
959-98-8	Endosulfan I	ug/L		ND	0.05	1

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9812010-04
Client Sample ID: EB112598
Site/Work ID: PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/25/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 12/01/98
Analysis Date: 12/05/98 Time:

Instrument: HP9
Analyst: ECL
Lab File ID: 1527

Method: 8081A\3510C
Run ID: R57178
Batch : WG50057

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
60-57-1	Dieldrin	ug/L		ND	0.10	1
72-55-9	4,4'-DDE	ug/L		ND	0.10	1
72-20-8	Endrin	ug/L		ND	0.10	1
33213-65-9	Endosulfan II	ug/L		ND	0.10	1
72-54-8	4,4'-DDD	ug/L		ND	0.10	1
1031-07-8	Endosulfan sulfate	ug/L		ND	0.10	1
50-29-3	4,4'-DDT	ug/L		ND	0.10	1
72-43-5	Methoxychlor	ug/L		ND	0.50	1
53494-70-5	Endrin ketone	ug/L		ND	0.10	1
7421-93-4	Endrin aldehyde	ug/L		ND	0.10	1
5103-71-9	alpha Chlordane	ug/L		ND	0.05	1
5103-74-2	gamma Chlordane	ug/L		ND	0.05	1
8001-35-2	Toxaphene	ug/L		ND	1.0	1
	gamma-BHC (Lindane)	ug/L		ND	0.05	1

SURROGATES- In Percent Recovery:

2,4,5,6-Tetrachloro-m-xylene	53.8	(13 - 154%)
Decachlorobiphenyl	61.0	(25 - 140%)

RL = Reporting Limit

KEMRON ENVIRO[illegible]NTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9812010-04
Client Sample ID: EB112598
Site/Work ID: PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/25/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 12/02/98
Analysis Date: 12/04/98 Time: 19:06

Instrument: HPMS7
Analyst: MLS
Lab File ID: 6494

Method: 8270C\3510C
Run ID: R57120
Batch : WG49979

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L		ND	10	2
111-44-4	Bis(2-Chloroethyl)ether	ug/L		ND	10	2
95-57-8	2-Chlorophenol	ug/L		ND	10	2
541-73-1	1,3-Dichlorobenzene	ug/L		ND	10	2
106-46-7	1,4-Dichlorobenzene	ug/L		ND	10	2
95-50-1	1,2-Dichlorobenzene	ug/L		ND	10	2
95-48-7	2-Methylphenol	ug/L		ND	10	2
108-60-1	bis(2-Chloroisopropyl)ether	ug/L		ND	10	2
106-44-5	4-Methylphenol	ug/L		ND	10	2
621-64-7	N-Nitroso-di-n-propylamine	ug/L		ND	10	2
67-72-1	Hexachloroethane	ug/L		ND	10	2
98-95-3	Nitrobenzene	ug/L		ND	10	2
78-59-1	Isophorone	ug/L		ND	10	2
88-75-5	2-Nitrophenol	ug/L		ND	10	2
105-67-9	2,4-Dimethylphenol	ug/L		ND	10	2
111-91-1	Bis(2-Chloroethoxy)Methane	ug/L		ND	10	2
120-83-2	2,4-Dichlorophenol	ug/L		ND	10	2
120-82-1	1,2,4-Trichlorobenzene	ug/L		ND	10	2
91-20-3	Naphthalene	ug/L		ND	10	2
106-47-8	4-Chloroaniline	ug/L		ND	10	2
87-68-3	Hexachlorobutadiene	ug/L		ND	10	2
59-50-7	4-Chloro-3-methylphenol	ug/L		ND	10	2
91-57-6	2-Methylnaphthalene	ug/L		ND	10	2
77-47-4	Hexachlorocyclopentadiene	ug/L		ND	10	2
88-06-2	2,4,6-Trichlorophenol	ug/L		ND	10	2
95-95-4	2,4,5-Trichlorophenol	ug/L		ND	50	2
91-58-7	2-Chloronaphthalene	ug/L		ND	10	2
88-74-4	2-Nitroaniline	ug/L		ND	50	2
131-11-3	Dimethylphthalate	ug/L		ND	10	2
208-96-8	Acenaphthylene	ug/L		ND	10	2
606-20-2	2,6-Dinitrotoluene	ug/L		ND	10	2
99-09-2	3-Nitroaniline	ug/L		ND	50	2
83-32-9	Acenaphthene	ug/L		ND	10	2
51-28-5	2,4-Dinitrophenol	ug/L		ND	50	2
100-02-7	4-Nitrophenol	ug/L		ND	50	2
132-64-9	Dibenzofuran	ug/L		ND	10	2
121-14-2	2,4-Dinitrotoluene	ug/L		ND	10	2
84-66-2	Diethylphthalate	ug/L		ND	10	2
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L		ND	10	2

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9812010-04
Client Sample ID: EB112598
Site/Work ID: PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/25/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 12/02/98
Analysis Date: 12/04/98 Time: 19:06

Instrument: HPMS7
Analyst: MLS
Lab File ID: 6494

Method: 8270C\3510C
Run ID: R57120
Batch : WG49979

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L		ND	10	2
100-01-6	4-Nitroaniline	ug/L		ND	50	2
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	50	2
86-30-6	N-Nitrosodiphenylamine	ug/L		ND	10	2
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	10	2
118-74-1	Hexachlorobenzene	ug/L		ND	10	2
87-86-5	Pentachlorophenol	ug/L		ND	50	2
85-01-8	Phenanthrene	ug/L		ND	10	2
120-12-7	Anthracene	ug/L		ND	10	2
86-74-8	Carbazole	ug/L		ND	10	2
84-74-2	Di-N-Butylphthalate	ug/L		ND	10	2
206-44-0	Fluoranthene	ug/L		ND	10	2
129-00-0	Pyrene	ug/L		ND	10	2
85-68-7	Butylbenzylphthalate	ug/L		ND	10	2
91-94-1	3,3'-Dichlorobenzidine	ug/L		ND	20	2
56-55-3	Benzo(a)anthracene	ug/L		ND	10	2
218-01-9	Chrysene	ug/L		ND	10	2
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	10	2
117-84-0	Di-n-octylphthalate	ug/L		ND	10	2
205-99-2	Benzo(b)fluoranthene	ug/L		ND	10	2
207-08-9	Benzo(k)fluoranthene	ug/L		ND	10	2
50-32-8	Benzo(a)pyrene	ug/L		ND	10	2
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L		ND	10	2
53-70-3	Dibenzo(a,h)Anthracene	ug/L		ND	10	2
191-24-2	Benzo(g,h,i)Perylene	ug/L		ND	10	2

SURROGATES- In Percent Recovery:

2-Fluorophenol	36.3		(21 - 100%)
Phenol-d5	22.9		(10 - 94%)
Nitrobenzene-d5	59.6		(35 - 114%)
2-Fluorobiphenyl	64.3		(43 - 116%)
2,4,6-Tribromophenol	103		(10 - 123%)
p-Terphenyl-d14	148	*	(33 - 141%)

RL = Reporting Limit

KEMRON ENVIRO[illegible]NTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9812010-04
Client Sample ID: EB112598
Site/Work ID: PEDRICKTOWN
Matrix: Water

Dil. Type: N/A
COC Info: N/A
Date Collected: 11/25/98

Sample Weight: N/A
Extract Volume: N/A
% Solid: N/A

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 12/03/98 Time: 14:23

Instrument: HPMS8
Analyst: JLH
Lab File ID: 8-5573

Method: 8260B
Run ID: R57170
Batch : WG49967

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/L		ND	10	1
74-83-9	Bromomethane	ug/L		ND	10	1
75-01-4	Vinyl chloride	ug/L		ND	10	1
75-00-3	Chloroethane	ug/L		ND	10	1
75-09-2	Methylene chloride	ug/L		ND	5.0	1
67-64-1	Acetone	ug/L		ND	10	1
75-15-0	Carbon disulfide	ug/L		ND	5.0	1
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1
75-34-3	1,1-Dichloroethane	ug/L		ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L		ND	5.0	1
67-66-3	Chloroform	ug/L		ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	1
78-93-3	2-Butanone	ug/L	2.6	J	10	1
71-55-6	1,1,1-Trichloroethane	ug/L		ND	5.0	1
56-23-5	Carbon tetrachloride	ug/L		ND	5.0	1
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	1
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	1
79-01-6	Trichloroethene	ug/L		ND	5.0	1
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1
71-43-2	Benzene	ug/L		ND	5.0	1
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	1
75-25-2	Bromoform	ug/L		ND	5.0	1
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	1
591-78-6	2-Hexanone	ug/L		ND	10	1
127-18-4	Tetrachloroethene	ug/L		ND	5.0	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0	1
108-88-3	Toluene	ug/L		ND	5.0	1
108-90-7	Chlorobenzene	ug/L		ND	5.0	1
100-41-4	Ethyl benzene	ug/L		ND	5.0	1
100-42-5	Styrene	ug/L		ND	5.0	1
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1

SURROGATES- In Percent Recovery:

Dibromofluoromethane	108	(86 - 118%)
Toluene-d8	95.2	(88 - 110%)
p-Bromofluorobenzene	94.8	(86 - 115%)
1,2-Dichloroethane-d4	108	(80 - 120%)

RL = Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9812010-05
Client Sample ID: WEIR112498
Site/Work ID: PEDRICKTOWN

Matrix: Water
Collected: 11/24/98 N/A

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	19		5.0	1	N/A	DLN	12/01/98	16:20	160.2

Lab Sample ID: L9812010-06
Client Sample ID: WEIR1123
Site/Work ID: PEDRICKTOWN

Matrix: Water
Collected: 11/23/98 N/A

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	17		5.0	1	N/A	DLN	12/01/98	16:20	160.2

Lab Sample ID: L9812010-07
Client Sample ID: WEIR1122
Site/Work ID: PEDRICKTOWN

Matrix: Water
Collected: 11/22/98 N/A

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	13		5.0	1	N/A	DLN	12/01/98	16:20	160.2

Lab Sample ID: L9812010-08
Client Sample ID: WEIR1121
Site/Work ID: PEDRICKTOWN

Matrix: Water
Collected: 11/21/98 N/A

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	10		5.0	1	N/A	DLN	12/01/98	16:20	160.2

RL = Reporting Limit

Lab Sample ID: L9812010-09
Client Sample ID: WEIR1120
Site/Work ID: PEDRICKTOWN

Matrix: Water
Collected: 11/20/98 N/A

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	7.5		5.0	1	N/A	DLN	12/01/98	16:20	160.2

Lab Sample ID: L9812010-10
Client Sample ID: WEIR1119
Site/Work ID: PEDRICKTOWN

Matrix: Water
Collected: 11/19/98 N/A

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Total Suspended Solids.....	mg/L	12		5.0	1	N/A	DLN	12/01/98	16:20	160.2

RL = Reporting Limit

Order #: 98-12-010
December 9, 1998 04:45 pm

KEMRON ENVIRONMENTAL SERVICES
WORK GROUPS

Work Group	Run ID	Sample	Dil Type	Matrix	Product	Method	Date Collected	Department
WG49913	R57178	L9812010-01		Water	Organochlorine Pesticides	8081A\3510C	24-NOV-1998	Extraction
WG49913	R57178	L9812010-02		Water	Organochlorine Pesticides	8081A\3510C	16-NOV-1998	Extraction
WG49913	R57178	L9812010-03		Water	Organochlorine Pesticides	8081A\3510C	19-NOV-1998	Extraction
WG49913	R57178	L9812010-04		Water	Organochlorine Pesticides	8081A\3510C	25-NOV-1998	Extraction
WG49914	R57159	L9812010-01		Water	PCB's (Water)	8082/3550	24-NOV-1998	Extraction
WG49914	R57159	L9812010-02		Water	PCB's (Water)	8082/3550	16-NOV-1998	Extraction
WG49914	R57159	L9812010-03		Water	PCB's (Water)	8082/3550	19-NOV-1998	Extraction
WG49914	R57159	L9812010-04		Water	PCB's (Water)	8082/3550	25-NOV-1998	Extraction
WG49924	R57159	L9812010-01		Water	PCB's (Water)	8082/3550	24-NOV-1998	Semivolatile - GC
WG49924	R57159	L9812010-02		Water	PCB's (Water)	8082/3550	16-NOV-1998	Semivolatile - GC
WG49924	R57159	L9812010-03		Water	PCB's (Water)	8082/3550	19-NOV-1998	Semivolatile - GC
WG49924	R57159	L9812010-04		Water	PCB's (Water)	8082/3550	25-NOV-1998	Semivolatile - GC
WG49936	R57120	L9812010-01		Water	TCL Semivolatiles	8270C\3510C	24-NOV-1998	Extraction
WG49936	R57120	L9812010-02		Water	TCL Semivolatiles	8270C\3510C	16-NOV-1998	Extraction
WG49936	R57120	L9812010-03		Water	TCL Semivolatiles	8270C\3510C	19-NOV-1998	Extraction
WG49936	R57120	L9812010-04		Water	TCL Semivolatiles	8270C\3510C	25-NOV-1998	Extraction
WG49956	R56962	L9812010-05		Water	Total Suspended Solids	160.2	24-NOV-1998	Conventionals
WG49956	R56962	L9812010-06		Water	Total Suspended Solids	160.2	23-NOV-1998	Conventionals
WG49956	R56962	L9812010-07		Water	Total Suspended Solids	160.2	22-NOV-1998	Conventionals
WG49956	R56962	L9812010-08		Water	Total Suspended Solids	160.2	21-NOV-1998	Conventionals
WG49956	R56962	L9812010-09		Water	Total Suspended Solids	160.2	20-NOV-1998	Conventionals
WG49956	R56962	L9812010-10		Water	Total Suspended Solids	160.2	19-NOV-1998	Conventionals
WG49967	R57170	L9812010-01		Water	TCL Volatiles	8260B	24-NOV-1998	Volatile - GC/MS
WG49967	R57170	L9812010-03		Water	TCL Volatiles	8260B	19-NOV-1998	Volatile - GC/MS
WG49967	R57170	L9812010-04		Water	TCL Volatiles	8260B	25-NOV-1998	Volatile - GC/MS
WG49979	R57120	L9812010-01		Water	TCL Semivolatiles	8270C\3510C	24-NOV-1998	Semivolatile - GC/MS
WG49979	R57120	L9812010-02		Water	TCL Semivolatiles	8270C\3510C	16-NOV-1998	Semivolatile - GC/MS
WG49979	R57120	L9812010-03		Water	TCL Semivolatiles	8270C\3510C	19-NOV-1998	Semivolatile - GC/MS
WG49979	R57120	L9812010-04		Water	TCL Semivolatiles	8270C\3510C	25-NOV-1998	Semivolatile - GC/MS
WG50057	R57178	L9812010-01		Water	Organochlorine Pesticides	8081A\3510C	24-NOV-1998	Semivolatile - GC
WG50057	R57178	L9812010-02		Water	Organochlorine Pesticides	8081A\3510C	16-NOV-1998	Semivolatile - GC
WG50057	R57178	L9812010-03		Water	Organochlorine Pesticides	8081A\3510C	19-NOV-1998	Semivolatile - GC
WG50057	R57178	L9812010-04		Water	Organochlorine Pesticides	8081A\3510C	25-NOV-1998	Semivolatile - GC

KEMRON ANALYST LIST

Ohio Valley Laboratory

10/28/98

ALC - - Ann L. Clark
BAD - - Becky A. Diehl
CEB - - Chad E. Barnes
CDB - - Christy D. Burton
CLH - - Chris L. Hurst
CMS - - Crystal M. Stevens
CRC - - Carla R. Cochran
DIH - - Deanna I. Hesson
DKM - - Dewey K. Miller
DLN - - Deanna L. Norton
DLP - - Dorothy L. Payne
ECL - - Eric C. Lawson
FEH - - Fay E. Harmon
HV - - Hema Vilasagar
JLH - - Janice L. Holland
JWR - - John W. Richards
JYH - - Ji Y. Hu
KHA - - Kim H. Archer
KAS - - Kevin A. Stutler
KRA - - Kathy R. Albertson
MDA - - Mike D. Albertson
MDC - - Michael D. Cochran
MES - - Mary E. Schiling
MLS - - Michael L. Schimmel
MMB - - Maren M. Beery
RDC - - Rebecca D. Cutlip
RDS - - Rebecca D. Sutton
REF - - Ron E. Fertile
REK - - Robert E. Kyer
RSS - - Regina S. Simmons
RWC - - Rodney W. Campbell
SJK - - Sindy J. Kinney
SJM - - Shawn J. Marshall
SLP - - Sheri L. Pfalzgraf
SLT - - Stephanie L. Tepe
SMW - - Shauna M. Welch
SPL - - Steve P. Learn
TJW - - Thomas J. Ware
TRS - - Todd R. Stack
VC - - Vicki Collier
VMN - - Vincent M. Nedeff

KEMRON Environmental Services, Inc.
LIST OF VALID QUALIFIERS (qual)
March 9, 1998

Qualifier	Description
(A)	See the report narrative
(B)	See the report narrative
(C)	See the report narrative
+	Correlation coefficient for the MSA is less than 0.995
<	Less than
>	Greater than
B	Present in the method blank
C	Confirmed by GC/MS
*	Surrogate or spike compound out of range
CG	Confluent growth
D	The analyte was quantified at a secondary dilution factor
DL	Surrogate or spike was diluted out
E	Estimated concentration due to sample matrix interference
F	Present below nominal reporting limit (AFCEE only)
FL	Free liquid
I	Semiquantitative result, out of instrument calibration range
J	Present below nominal reporting limit
L	Sample reporting limits elevated due to matrix interference
M	Duplicate injection precision not met

Qualifier	Description
N	Tentatively Identified Compound (TIC)
NA	Not applicable
ND	Not detected at or above the reporting limit (RL)
NF	Not found
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentration > 25% difference between the two GC columns
QNS	Quantity not sufficient to perform analysis
R	Analyte exceeds regulatory limit
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TNTC	Too numerous to count
U	Analyzed for but not detected
W	Post-digestion spike for furnace AA out of control limits
X	Can not be resolved from isomer. See below.

Special Notes for Organic Analytes

1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

INORGANIC QA/QC

KEMRON
ENVIRONMENTAL SERVICES

KEMRON ENVIRONMENTAL SERVICES
OHIO VALLEY LABORATORY
QUALITY CONTROL SUMMARY

WORKGROUP: wg49956
METHOD: 160.2
MATRIX: Water
UNITS: mg/L

RUN DATE: 12/1/98
ANALYST: dln
DUPLICATE: 12-008-01

ANALYTE	RDL	Blank	T-LCS	LCS	REP1	REP2	SAMPLE RESULT	T-MS	MS	PERCENT RECOVERY LCS	LCS LCL	LCS UCL	MS	MS LCL	MS UCL	PERCENT RPD REP RPD	RPD UCL
TSS	5.00	ND	50.00	46.00	29.00	25.00	NR	NR	NR	92.0	81.0	114.5	NR	NR	NR	14.81	20.00

NOTES & DEFINITIONS :

RDL = REPORTING DETECTION LIMIT
DL = DILUTED OUT
NA = NOT APPLICABLE
ND = NOT DETECTED
NR = NOT REQUIRED

LCS = LABORATORY CONTROL SAMPLE
T- LCS = TRUE VALUE OF LCS
REP1 = UNSPIKED SAMPLE REPLICATE 1
REP2 = UNSPIKED SAMPLE REPLICATE 2
SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX
T-MS = TRUE VALUE OF MATRIX SPIKE
MS = MATRIX SPIKE
LCL = LOWER CONTROL LIMIT
UCL = UPPER CONTROL LIMIT

REP RPD = RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES

ORGANIC QA/QC

Kemron
ENVIRONMENTAL SERVICES

Kemron Environmental Services -OVL
Volatile Quality Control Summary

Workgroup #:	wg649967	Run Date: 12/3/98	SMPL Num: 11-380-23	LCS DF:	1
Method:	8260B	Instrument ID: HPMS 8	SMPL FLNM: 8_5567.D	SMPL DF:	1000
Matrix:	WATER	BLK FLNM: 8_5564.D	MS FLNM: 8_5569.D	MS DF:	1000
Units:	ug/L	LCS FLNM: 8_5565.D	MSD FLNM: 8_5570.D	MSD DF:	1000

		CONCENTRATION, PPB							PERCENT RECOVERY									PERCENT RPD		OUTLIERS					
	RDL	Blank	LCS	LCS Spike Level	Sample	MS	MSD	MS Spike Level	BLK	LCS	LCS LCL	LCS UCL	SMPL	MS	MSD	MS LCL	MS UCL	MS RPD	RPD UCL	Blank	LCS	Sample	MS	MSD	RPD
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%	%						
dichlorodifluoromethane	10.0	ND	20.8	20.0	ND	19878.6	20334.6	20000.0	ND	104.2	38.0	148.0	ND	99.4	101.7	60.0	140.0	2.3	20.0						
chloromethane	10.0	ND	17.9	20.0	ND	17431.9	17894.7	20000.0	ND	89.3	56.0	132.0	ND	87.2	89.5	D	273.0	2.6	20.0						
vinyl chloride	10.0	ND	23.7	20.0	34657.8	55805.0	55565.3	20000.0	ND	118.3	68.0	125.0	34657.8	105.7	104.5	D	251.0	0.4	20.0						
bromomethane	10.0	ND	29.6	20.0	ND	28513.2	29129.6	20000.0	ND	148.0	55.0	138.0	ND	142.6	145.6	D	242.0	2.1	20.0		H				
chloroethane	10.0	ND	21.9	20.0	ND	21005.8	21770.5	20000.0	ND	109.4	70.0	128.0	ND	105.0	108.9	14.0	230.0	3.6	20.0						
trichlorofluoromethane	10.0	ND	25.6	20.0	ND	24781.9	25638.7	20000.0	ND	128.0	70.0	127.0	ND	123.9	128.2	17.0	181.0	3.4	20.0		H				
isoprene	NTC	ND	NS	20.0	ND	NS	NS	20000.0	ND	NS	NA	NA	ND	NS	NS	NA	NA	NA	20.0						
acrolein	NTC	ND	NS	20.0	ND	NS	NS	20000.0	ND	NS	NA	NA	ND	NS	NS	NA	NA	NA	20.0						
freon 113	NTC	ND	NS	20.0	ND	NS	NS	20000.0	ND	NS	NA	NA	ND	NS	NS	70.0	130.0	NA	20.0						
acetone	100.0	ND	17.4	20.0	ND	16884.9	17815.3	20000.0	ND	86.8	44.0	114.0	ND	84.4	89.1	70.0	130.0	5.4	20.0						
1,1-dichloroethene	5.0	ND	21.3	20.0	ND	20603.7	21608.1	20000.0	ND	106.5	69.0	144.0	ND	103.0	108.0	D	234.0	4.8	20.0						
dimethyl sulfide	NTC	ND	NS	20.0	ND	NS	NS	20000.0	ND	NS	NA	NA	ND	NS	NS	NA	NA	NA	20.0						
iodomethane	NTC	ND	23.6	20.0	ND	22974.0	24482.5	20000.0	ND	118.2	NA	NA	ND	114.9	122.4	70.0	130.0	6.4	20.0						
methylene chloride	5.0	ND	19.0	20.0	ND	18687.3	19311.4	20000.0	ND	95.1	71.0	128.0	ND	93.4	96.6	D	221.0	3.3	20.0						
carbon disulfide	5.0	ND	22.7	20.0	ND	21775.2	22457.3	20000.0	ND	113.3	67.0	136.0	ND	108.9	112.3	70.0	130.0	3.1	20.0						
acrylonitrile	NTC	ND	NS	20.0	ND	NS	NS	20000.0	ND	NS	NA	NA	ND	NS	NS	70.0	130.0	NA	20.0						
methyl-tert-butyl ether	NTC	ND	NS	20.0	ND	NS	NS	20000.0	ND	NS	NA	NA	ND	NS	NS	NA	NA	NA	20.0						
trans-1,2-dichloroethene	5.0	ND	21.9	20.0	2194.3	22073.7	23946.2	20000.0	ND	109.3	85.0	133.0	2194.3	104.4	108.8	54.0	156.0	3.7	20.0						
n-hexane	NTC	ND	NS	20.0	NS	NS	NS	20000.0	ND	NS	NS	NS	ND	NA	NA	NA	NA	NA	20.0						
vinyl acetate	10.0	ND	18.0	20.0	ND	17474.3	18467.9	20000.0	ND	90.0	9.0	236.0	ND	87.4	92.3	9.0	236.0	5.5	20.0						
1,1-dichloroethane	5.0	ND	21.1	20.0	ND	19925.9	20287.5	20000.0	ND	105.6	82.0	124.0	ND	99.6	101.4	59.0	155.0	1.8	20.0						
2-butanone	100.0	ND	16.0	20.0	ND	15440.3	16221.6	20000.0	ND	80.2	43.0	140.0	ND	77.2	81.1	70.0	130.0	4.9	20.0						
2,2-dichloropropane	5.0	ND	22.1	20.0	ND	20998.3	21764.5	20000.0	ND	110.4	77.0	126.0	ND	105.0	108.8	60.0	140.0	3.6	20.0						
cis-1,2-dichloroethene	5.0	ND	20.1	20.0	137189.0	151603.2	152810.3	20000.0	ND	100.4	69.0	130.0	137189.0	72.1	78.1	60.0	140.0	0.8	20.0						
chloroform	5.0	ND	22.1	20.0	ND	21251.2	21692.0	20000.0	ND	110.5	83.0	121.0	ND	106.3	108.5	51.0	138.0	2.1	20.0						
bromochloromethane	5.0	ND	23.2	20.0	ND	22294.3	23132.7	20000.0	ND	116.2	85.0	118.0	ND	111.5	115.7	60.0	140.0	3.7	20.0						
1,1,1-trichloroethane	5.0	ND	21.5	20.0	ND	20765.8	21626.5	20000.0	ND	107.7	74.0	125.0	ND	103.8	108.1	52.0	162.0	4.1	20.0						
cyclohexane	NTC	ND	NS	20.0	ND	NS	NS	20000.0	ND	NS	NA	NA	ND	NA	NA	NA	NA	NA	20.0						
1,1-dichloropropene	5.0	ND	22.6	20.0	ND	21961.9	22624.3	20000.0	ND	113.0	85.0	126.0	ND	109.8	113.1	60.0	140.0	3.0	20.0						
carbon tetrachloride	5.0	ND	20.4	20.0	ND	19680.1	20489.6	20000.0	ND	102.2	73.0	129.0	ND	98.4	102.4	70.0	140.0	4.0	20.0						
1,2-dichloroethane	5.0	ND	22.8	20.0	ND	22126.1	22595.3	20000.0	ND	113.9	76.0	123.0	ND	110.6	113.0	49.0	155.0	2.1	20.0						
benzene	5.0	ND	19.5	20.0	ND	19222.8	19571.7	20000.0	ND	97.7	86.0	118.0	ND	96.1	97.9	37.0	151.0	1.8	20.0						
trichloroethene	5.0	ND	22.0	20.0	ND	21229.0	21927.9	20000.0	ND	110.1	82.0	120.0	ND	106.1	109.6	71.0	157.0	3.2	20.0						
1,2-dichloropropane	5.0	ND	19.0	20.0	ND	18344.6	18859.4	20000.0	ND	94.9	74.0	126.0	ND	92.7	94.3	D	210.0	1.7	20.0						
bromodichloromethane	5.0	ND	21.0	20.0	ND	20610.9	20809.1	20000.0	ND	105.1	74.0	126.0	ND	103.1	104.0	35.0	155.0	1.0	20.0						
dibromomethane	5.0	ND	22.3	20.0	ND	21751.3	22031.0	20000.0	ND	111.3	78.0	125.0	ND	108.7	110.2	60.0	140.0	1.4	20.0						
2-chloroethylvinyl-ether	10.0	ND	17.0	20.0	ND	16765.1	17225.8	20000.0	ND	85.2	68.0	144.0	ND	83.8	86.1	70.0	130.0	2.7	20.0						
4-methyl-2-pentanone	10.0	ND	16.9	20.0	ND	17165.7	17919.3	20000.0	ND	84.6	79.0	127.0	ND	85.8	89.6	70.0	130.0	4.3	20.0						
cis-1,3-dichloropropene	5.0	ND	19.4	20.0	ND	18846.0	19218.5	20000.0	ND	97.1	77.0	123.0	ND	94.2	96.1	D	227.0	2.0	20.0						
dimethyl disulfide	NTC	ND	NS	20.0	ND	NS	NS	20000.0	ND	NS	NA	NA	ND	NS	NS	NA	NA	NA	20.0						
toluene	5.0	ND	19.5	20.0	ND	19147.1	19369.7	20000.0	ND	97.6	83.0	119.0	ND	95.7	96.8	47.0	150.0	1.2	20.0						
ethyl methacrylate	NTC	ND	NS	20.0	ND	NS	NS	20000.0	ND	NS	NA	NA	ND	NS	NS	NA	NA	NA	20.0						
trans-1,3-dichloropropene	5.0	ND	18.0	20.0	ND	17490.6	17755.7	20000.0	ND	90.0	74.0	124.0	ND	87.5	88.8	17.0	183.0	1.5	20.0						
1,1,2-trichloroethane	5.0	ND	20.0	20.0	ND	19459.2	19704.0	20000.0	ND	100.2	72.0	119.0	ND	97.3	98.5	52.0	150.0	1.2	20.0						

Kenaron Environmental Services -OVL
Volatile Quality Control Summary

Workgroup #: wg649967	Run Date: 12/3/98	SMPL Num: 11-380-23	LCS DF:	1
Method: 8260B	Instrument ID: HPMS 8	SMPL FLNM: 8_5567.D	SMPL DF:	1000
Matrix: WATER	BLK FLNM: 8_5564.D	MS FLNM: 8_5569.D	MS DF:	1000
Units: ug/L	LCS FLNM: 8_5565.D	MSD FLNM: 8_5570.D	MSD DF:	1000

		CONCENTRATION, PPB							PERCENT RECOVERY									PERCENT RPD OUTLIERS							
	RDL	BLK	LCS	LCS Spike Level	SMPL	MS	MSD	MS Spike Level	BLK	LCS	LCS LCL	LCS UCL	SMPL	MS	MSD	MS LCL	MSD UCL	MS RPD	RPD UCL	Blank	LCS	Sample	MS	MSD	RPD
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%	%						
2-hexanone	10.0	ND	15.7	20.0	ND	16053.0	16681.9	20000.0	ND	78.7	55.0	114.0	ND	80.3	83.4	70.0	130.0	3.8	20.0						
1,3-dichloropropane	5.0	ND	19.0	20.0	ND	18431.4	18765.4	20000.0	ND	94.9	73.0	122.0	ND	92.2	93.8	60.0	140.0	1.8	20.0						
tetrachloroethene	5.0	ND	20.8	20.0	ND	20206.0	20596.8	20000.0	ND	104.2	82.0	120.0	ND	101.0	103.0	64.0	148.0	1.9	20.0						
dibromochloromethane	5.0	ND	19.9	20.0	ND	19239.2	19473.0	20000.0	ND	99.6	72.0	121.0	ND	96.2	97.4	53.0	149.0	1.2	20.0						
1,2-dibromoethane	5.0	ND	20.2	20.0	ND	19795.0	20119.1	20000.0	ND	101.2	75.0	121.0	ND	99.0	100.6	60.0	140.0	1.6	20.0						
1-chlorohexane	NTC	ND	NS	20.0	ND	NS	NS	20000.0	ND	NS	NA	NA	ND	NS	NS	NA	NA	NA	20.0						
chlorobenzene	5.0	ND	20.8	20.0	ND	20294.7	20472.7	20000.0	ND	104.2	83.0	120.0	ND	101.5	102.4	37.0	160.0	0.9	20.0						
1,1,1,2-tetrachloroethane	5.0	ND	20.6	20.0	ND	19602.6	19730.2	20000.0	ND	102.8	79.0	118.0	ND	98.0	98.7	60.0	140.0	0.6	20.0						
ethylbenzene	5.0	ND	20.7	20.0	ND	20089.0	20323.5	20000.0	ND	103.5	83.0	119.0	ND	100.4	101.6	37.0	162.0	1.2	20.0						
m+p-xylene	5.0	ND	41.0	40.0	ND	39418.2	39964.4	40000.0	ND	102.6	81.0	121.0	ND	98.5	99.9	60.0	140.0	1.4	20.0						
o-xylene	5.0	ND	20.5	20.0	ND	19690.9	19900.0	20000.0	ND	102.7	81.0	199.0	ND	98.5	99.5	60.0	140.0	1.1	20.0						
styrene	5.0	ND	20.1	20.0	ND	19643.5	19786.3	20000.0	ND	100.7	81.0	118.0	ND	98.2	98.9	60.0	140.0	0.7	20.0						
bromoform	5.0	ND	18.5	20.0	ND	18210.2	18354.8	20000.0	ND	92.5	68.0	129.0	ND	91.1	91.8	45.0	169.0	0.8	20.0						
isopropylbenzene	5.0	ND	20.3	20.0	ND	19685.5	19946.4	20000.0	ND	101.5	81.0	121.0	ND	98.4	99.7	60.0	140.0	1.3	20.0						
1,1,2,2-tetrachloroethane	5.0	ND	20.5	20.0	ND	20390.0	20633.6	20000.0	ND	102.4	61.0	137.0	ND	101.9	103.1	46.0	157.0	1.2	20.0						
1,2,3-trichloropropane	5.0	ND	20.5	20.0	ND	20380.6	21026.1	20000.0	ND	102.7	72.0	130.0	ND	101.9	105.1	60.0	140.0	3.1	20.0						
trans-1,4-dichloro-2-butene	NTC	ND	1.2	20.0	ND	1310.0	1270.1	20000.0	ND	NS	NA	NA	ND	NS	NS	NA	NA	NA	20.0						
propyl-benzene	5.0	ND	20.0	20.0	ND	19675.2	19751.3	20000.0	ND	100.0	69.0	135.0	ND	98.4	98.8	60.0	140.0	0.4	20.0						
bromobenzene	5.0	ND	20.9	20.0	ND	20561.0	20837.8	20000.0	ND	104.7	86.0	118.0	ND	102.8	104.2	60.0	140.0	1.3	20.0						
1,3,5-trimethylbenzene	5.0	ND	19.7	20.0	ND	19435.2	19502.1	20000.0	ND	98.5	83.0	121.0	ND	97.2	97.5	60.0	140.0	0.3	20.0						
2-chlorotoluene	5.0	ND	19.3	20.0	ND	19496.3	20004.9	20000.0	ND	96.7	80.0	126.0	ND	97.5	100.0	60.0	140.0	2.6	20.0						
4-chlorotoluene	5.0	ND	20.3	20.0	ND	19390.3	19103.0	20000.0	ND	101.6	80.0	125.0	ND	97.0	95.5	60.0	140.0	1.5	20.0						
alpha-methyl-styrene	NTC	ND	NS	20.0	ND	NS	NS	20000.0	ND	NS	NA	NA	ND	NS	NS	NA	NA	NA	20.0						
tert-butyl-benzene	5.0	ND	20.1	20.0	ND	19734.3	19989.4	20000.0	ND	100.6	79.0	114.0	ND	98.7	99.9	60.0	140.0	1.3	20.0						
1,2,4-trimethylbenzene	5.0	ND	20.1	20.0	ND	19502.1	19602.5	20000.0	ND	100.4	84.0	121.0	ND	97.5	98.0	60.0	140.0	0.5	20.0						
sec-butyl-benzene	5.0	ND	19.7	20.0	ND	19213.3	19437.0	20000.0	ND	98.5	81.0	122.0	ND	96.1	97.2	60.0	140.0	1.2	20.0						
p-isopropyl-toluene	5.0	ND	19.3	20.0	ND	18778.4	18854.7	20000.0	ND	96.5	80.0	119.0	ND	93.9	94.3	60.0	140.0	0.4	20.0						
1,3-dichlorobenzene	5.0	ND	20.8	20.0	ND	20137.5	20373.7	20000.0	ND	104.0	85.0	119.0	ND	100.7	101.9	60.0	140.0	1.2	20.0						
1,4-dichlorobenzene	5.0	ND	20.7	20.0	ND	20223.4	20426.3	20000.0	ND	103.5	82.0	122.0	ND	101.1	102.1	18.0	190.0	1.0	20.0						
n-butyl-benzene	5.0	ND	19.5	20.0	ND	18860.0	18832.9	20000.0	ND	97.3	80.0	125.0	ND	94.3	94.2	60.0	140.0	0.1	20.0						
1,2-dichlorobenzene	5.0	ND	21.1	20.0	ND	20720.8	20613.2	20000.0	ND	105.6	86.0	119.0	ND	103.6	103.1	19.0	190.0	0.5	20.0						
2-dibromo-3-chloropropane	5.0	ND	17.8	20.0	ND	17956.0	18074.8	20000.0	ND	89.2	66.0	134.0	ND	89.8	90.4	60.0	140.0	0.7	20.0						
1,2,4-trichlorobenzene	5.0	ND	20.2	20.0	ND	19694.1	19642.9	20000.0	ND	100.8	78.0	122.0	ND	98.5	98.2	60.0	140.0	0.3	20.0						
hexachlorobutadiene	5.0	ND	18.6	20.0	ND	18026.1	18484.7	20000.0	ND	92.9	73.0	125.0	ND	90.1	92.4	60.0	140.0	2.5	20.0						
napthalene	10.0	ND	20.2	20.0	ND	19693.8	19866.3	20000.0	ND	101.2	74.0	148.0	ND	98.5	99.3	60.0	140.0	0.9	20.0						
1,2,3-trichlorobenzene	5.0	ND	19.9	20.0	ND	19574.0	19737.9	20000.0	ND	99.7	74.0	124.0	ND	97.9	98.7	60.0	140.0	0.8	20.0						
Surrogates																									
dibromofluoromethane		54.0	53.2	50.0	53.8	52.5	52.9	50.0	108.0	106.5	86	118	107.6	105.0	105.7										
1,2-dichloroethane-d4		54.3	53.8	50.0	54.2	53.2	53.7	50.0	108.6	107.7	80	120	108.4	106.4	107.4										
toluene-d8		47.2	46.8	50.0	46.8	46.9	47.2	50.0	94.4	93.6	88	110	93.5	93.9	94.4										
p-bromofluorobenzene		46.2	46.8	50.0	46.8	46.9	46.7	50.0	92.4	93.6	86	115	93.6	93.9	93.3										

Notes and Definitions:
RDL= Reporting Detection Limit
BLK= Method Blank
LCS= Laboratory Control Sample

SMPL= Sample Results
MS/MSD= Matrix Spike / Matrix Spike Duplicate
LCL= Lower Control Limit
UCL= Upper Control Limit

RPD= Relative Percent Difference
H=Above control limit
L=Below control limit

KEMRON ENVIRONMENTAL SERVICES , OVL
SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP : WG49979
METHOD : 8270
MATRIX : WATER
CONCENTRATION UNITS : UG/L
PREP WORK GRP : WG49935

EXT DATE : 12/2/98
BENCH SHEET : V105P93
BLK FLNM : 6490
LCS FLNM: 6489

RUN DATE : 12/4/98
SMPL ID : L9812029-02 WATER
SMPL FLNM : 6495
MS FLNM : 6496
MSD FLNM : 6497

INSTRUMENT : HPMS7
ANALYST : MLS

ANALYTE	CONCENTRATION , ug / L								PERCENT RECOVERY , %									PERCENT			BEYOND LIMITS				
	RDL	BLANK	LCS SPIKE ADDED	LCS	SAMPLE	MS SPIKE ADDED	MS	MSD	BLANK	LCS	LCS LCL	LCS UCL	SAMPLE	MS	MSD	MS LCL	MS UCL	MSD RPD	RPD UCL	RPD > LIMIT	SAMPLE	BLANK	LCS	MS	MSD
PYRIDINE	5.0	ND	100	14.6	ND	200	16.6	27.2	NA	14.6	5	150	NA	8.3	13.6	5	150	48	40	*					
N-NITROSODIMETHYLAMINE	5.0	ND	100	37.2	ND	200	75.5	73.7	NA	37.2	5	150	NA	37.8	36.9	5	150	2	40						
ANILINE	10.0	ND	100	37.4	ND	200	84.2	79.3	NA	37.4	5	150	NA	42.1	39.7	5	150	6	40						
PHENOL	5.0	ND	100	27.1	ND	200	51.8	52.0	NA	27.1	5	112	NA	25.9	26.0	5	112	0	40						
BIS(2-CHLOROETHYL)ETHER	5.0	ND	100	59.8	ND	200	110.2	110.9	NA	59.8	12	158	NA	55.1	55.5	12	158	1	40						
2-CHLOROPHENOL	5.0	ND	100	54.7	ND	200	100.2	103.5	NA	54.7	23	134	NA	50.1	51.6	23	134	3	40						
1,3-DICHLOROBENZENE	5.0	ND	100	46.0	ND	200	82.8	89.6	NA	46.0	5	172	NA	41.4	44.8	5	172	8	40						
1,4-DICHLOROBENZENE	10.0	ND	100	47.0	ND	200	83.8	90.7	NA	47.0	20	124	NA	41.9	45.3	20	124	8	40						
BENZYL ALCOHOL	5.0	ND	100	51.1	ND	200	103.3	97.9	NA	51.1	5	150	NA	51.7	48.9	5	150	5	40						
1,2-DICHLOROBENZENE	5.0	ND	100	49.0	ND	200	87.0	93.0	NA	49.0	32	129	NA	43.5	46.5	32	129	7	40						
2-METHYLPHENOL	5.0	ND	100	54.7	ND	200	99.1	100.1	NA	54.7	5	150	NA	49.6	50.0	5	150	1	40						
BIS(2-CHLOROISOPROPYL)ETHER	5.0	ND	100	58.8	ND	200	105.9	111.1	NA	58.8	36	166	NA	53.0	55.6	36	166	5	40						
3- & 4-METHYLPHENOL	5.0	ND	100	51.8	ND	200	93.2	96.1	NA	51.8	5	150	NA	46.6	48.0	5	150	3	40						
N-NITROSO-DI-N-PROPYLAMINE	5.0	ND	100	59.2	ND	200	111.0	111.8	NA	59.2	5	230	NA	55.5	55.9	5	230	1	40						
HEXACHLOROETHANE	5.0	ND	100	46.9	ND	200	80.2	86.6	NA	46.9	40	113	NA	40.1	43.3	40	113	8	40						
NITROBENZENE	5.0	ND	100	57.5	ND	200	110.3	113.0	NA	57.5	35	180	NA	55.2	56.5	35	180	2	40						
ISOPHORONE	5.0	ND	100	64.8	ND	200	123.7	122.5	NA	64.8	21	196	NA	61.9	61.3	21	196	1	40						
2-NITROPHENOL	5.0	ND	100	59.7	ND	200	107.6	109.5	NA	59.7	29	182	NA	53.8	54.7	29	182	2	40						
2,4-DIMETHYLPHENOL	5.0	ND	100	63.5	ND	200	116.9	116.1	NA	63.5	32	119	NA	58.4	58.0	32	119	1	40						
BIS(2-CHLOROETHOXY)METHANE	25.0	ND	100	59.7	ND	200	110.8	111.4	NA	59.7	33	184	NA	55.4	55.7	33	184	1	40						
BENZOIC ACID	5.0	ND	100	3.7	ND	200	45.2	43.2	NA	3.7	5	150	NA	22.6	21.6	5	150	4	40				L		
2,4-DICHLOROPHENOL	5.0	ND	100	56.2	ND	200	112.5	115.4	NA	56.2	39	135	NA	56.2	57.7	39	135	3	40						
1,2,4-TRICHLOROBENZENE	5.0	ND	100	50.4	ND	200	91.0	93.6	NA	50.4	44	142	NA	45.5	46.8	44	142	3	40						
NAPHTHALENE	5.0	ND	100	58.6	ND	200	106.8	109.8	NA	58.6	21	133	NA	53.4	54.9	21	133	3	40						
4-CHLOROANILINE	5.0	ND	100	58.8	ND	200	143.4	112.8	NA	58.8	5	150	NA	71.7	56.4	5	150	24	40						
HEXACHLOROBUTADIENE	10.0	ND	100	48.9	ND	200	90.0	94.5	NA	48.9	24	116	NA	45.0	47.2	24	116	5	40						
4-CHLORO-3-METHYLPHENOL	5.0	ND	100	90.9	ND	200	139.6	165.7	NA	90.9	22	147	NA	69.8	82.9	22	147	17	40						
2-METHYLNAPHTHALENE	5.0	ND	100	57.7	ND	200	105.3	105.5	NA	57.7	5	150	NA	52.7	52.7	5	150	0	40						
HEXACHLOROCYCLOPENTADIENE	5.0	ND	100	23.3	ND	200	13.7	18.3	NA	23.3	5	150	NA	6.9	8.1	5	150	17	40						
2,4,6-TRICHLOROPHENOL	25.0	ND	100	84.2	ND	200	121.9	141.3	NA	84.2	37	144	NA	61.0	70.7	37	144	15	40						
2,4,5-TRICHLOROPHENOL	5.0	ND	100	94.2	ND	200	143.3	174.9	NA	94.2	5	150	NA	71.6	87.5	5	150	20	40						
2-CHLORONAPHTHALENE	25.0	ND	100	61.0	ND	200	108.0	109.9	NA	61.0	60	118	NA	54.0	54.9	60	118	2	40					L	L
2-NITROANILINE	5.0	ND	100	92.9	ND	200	147.7	169.0	NA	92.9	5	150	NA	73.8	84.5	5	150	13	40						
DIMETHYLPHTHALATE	5.0	ND	100	88.0	ND	200	148.0	161.2	NA	88.0	5	112	NA	74.0	80.6	5	112	9	40						
ACENAPHTHYLENE	5.0	ND	100	75.0	ND	200	125.2	132.2	NA	75.0	33	145	NA	62.6	66.1	33	145	5	40						
2,6-DINITROTOLUENE	5.0	ND	100	87.4	ND	200	148.9	162.5	NA	87.4	50	158	NA	74.5	81.2	50	158	9	40						
3-NITROANILINE	25.0	ND	100	89.4	ND	200	166.4	160.5	NA	89.4	5	150	NA	83.2	80.2	5	150	4	40						
ACENAPHTHENE	5.0	ND	100	73.1	ND	200	121.5	128.2	NA	73.1	47	145	NA	60.7	64.1	47	145	5	40						
2,4-DINITROPHENOL	25.0	ND	100	61.6	ND	200	108.4	119.1	NA	61.6	5	191	NA	54.2	59.6	5	191	9	40						
4-NITROPHENOL	25.0	ND	100	40.5	ND	200	83.9	90.1	NA	40.5	5	132	NA	42.0	45.1	5	132	7	40						
DIBENZOFURAN	5.0	ND	100	78.4	ND	200	125.6	137.9	NA	78.4	5	150	NA	62.8	68.9	5	150	9	40						
2,4-DINITROTOLUENE	5.0	ND	100	97.4	ND	200	187.6	195.3	NA	97.4	39	139	NA	93.8	97.7	39	139	4	40						

NOTES & DEFINITIONS :
NA = NOT APPLICABLE
ND = NOT DETECTED
RDL=REPORTING DETECTION LIMIT

NS = NOT SPIKED
L= below QC limit
H=above QC limit

KEMRON ENVIRONMENTAL SERVICES , OVL
SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP : WG49979
METHOD : 8270
MATRIX : WATER
CONCENTRATION UNITS : UG/L
PREP WORK GRP : WG49936

EXT DATE : 12/2/98
BENCH SHEET : V105P93
BLK FLNM : 6490
LCS FLNM: 6489

RUN DATE : 12/4/98
SMPL ID : L9812029-02 WATER
SMPL FLNM : 10/12/17
MS FLNM : 10/13/17
MSD FLNM : 10/14/17

INSTRUMENT : HPMS7
ANALYST : MLS

ANALYTE	CONCENTRATION , ug/L								PERCENT RECOVERY , %									PERCENT			BEYOND LIMITS				
	RDL	BLANK	LCS SPIKE ADDED	LCS	SAMPLE	MS SPIKE ADDED	MS	MSD	BLANK	LCS	LCS LCL	LCS UCL	SAMPLE	MS	MSD	MS LCL	MS UCL	MSD RPD	RPD UCL	RPD > LIMIT	SAMPLE	BLANK	LCS	MS	MSD
DIETHYLPHTHALATE	5.0	ND	100	96.4	ND	200	182.1	190.8	NA	96.4	5	114	NA	91.0	95.4	5	114	5	40						
FLUORENE	5.0	ND	100	91.2	ND	200	153.5	169.2	NA	91.2	25	158	NA	76.7	84.6	25	158	10	40						
4-CHLOROPHENYL-PHENYL ETHE	5.0	ND	100	88.8	ND	200	144.6	161.6	NA	88.8	59	121	NA	72.3	80.8	59	121	11	40						
4-NITROANILINE	25.0	ND	100	113.7	ND	200	217.3	223.5	NA	113.7	5	150	NA	108.6	111.7	5	150	3	40						
1,2-DIPHENYLHYDRAZINE *	5.0	ND	100	93.2	ND	200	160.8	175.5	NA	93.2	5	150	NA	80.4	87.8	5	150	9	40						
4,6-DINITRO-2-METHYLPHENOL	25.0	ND	100	105.3	ND	200	188.8	198.9	NA	105.3	5	181	NA	94.4	99.5	5	181	5	40						
N-NITROSODIPHENYLAMINE **	5.0	ND	100	99.1	ND	200	179.8	191.6	NA	99.1	5	150	NA	89.9	95.9	5	150	6	40						
4-BROMOPHENYL-PHENYL ETHE	5.0	ND	100	83.1	ND	200	143.2	156.4	NA	83.1	53	127	NA	71.6	78.2	53	127	9	40						
HEXACHLOROBENZENE	5.0	ND	100	93.1	ND	200	174.2	182.3	NA	93.1	5	152	NA	87.1	91.1	5	152	5	40						
PENTACHLOROPHENOL	25.0	ND	100	89.2	ND	200	179.1	190.2	NA	89.2	14	176	NA	89.5	95.1	14	176	6	40						
PHENANTHRENE	5.0	ND	100	102.6	ND	200	200.2	208.7	NA	102.6	54	120	NA	100.1	104.4	54	120	4	40						
ANTHRACENE	5.0	ND	100	101.5	ND	200	197.5	206.3	NA	101.5	27	133	NA	98.8	103.2	27	133	4	40						
CARBAZOLE	5.0	ND	100	115.1	ND	200	245.4	251.7	NA	115.1	5	150	NA	122.7	125.9	5	150	3	40						
DI-N-BUTYLPHTHALATE	5.0	ND	100	108.7	ND	200	223.3	229.7	NA	108.7	1	118	NA	111.7	114.8	1	118	3	40						
FLUORANTHENE	5.0	ND	100	113.5	ND	200	226.0	233.9	NA	113.5	26	137	NA	113.0	117.0	26	137	3	40						
PYRENE	5.0	ND	100	107.8	ND	200	232.7	239.7	NA	107.8	52	115	NA	116.3	119.8	52	115	3	40				H	H	
BUTYLBENZYLPHTHALATE	5.0	ND	100	111.3	ND	200	235.0	242.7	NA	111.3	5	152	NA	117.5	121.3	5	152	3	40						
BENZO(A)ANTHRACENE	10.0	ND	100	109.0	ND	200	225.7	233.6	NA	109.0	5	262	NA	112.8	116.8	5	262	3	40						
3,3'-DICHLOROBENZIDINE	5.0	ND	100	120.9	ND	200	199.9	216.1	NA	120.9	33	143	NA	100.0	108.0	33	143	8	40						
CHRYSENE	5.0	ND	100	151.1	ND	200	313.1	321.6	NA	151.1	17	168	NA	156.6	160.9	17	168	3	40						
BIS(2-ETHYLHEXYL)PHTHALATE	5.0	ND	100	111.8	ND	200	240.4	245.8	NA	111.8	8	158	NA	120.2	122.9	8	158	2	40						
DI-N-OCTYLPHTHALATE	5.0	ND	100	103.1	ND	200	219.2	222.5	NA	103.1	4	146	NA	109.6	111.3	4	146	1	40						
BENZO(B)FLUORANTHENE	5.0	ND	100	102.3	ND	200	206.4	217.0	NA	102.3	24	159	NA	103.2	108.5	24	159	5	40						
BENZO(K)FLUORANTHENE	5.0	ND	100	106.7	ND	200	229.6	225.0	NA	106.7	11	162	NA	114.8	112.5	11	162	2	40						
BENZO(A)PYRENE	5.0	ND	100	104.3	ND	200	215.7	219.9	NA	104.3	17	163	NA	107.9	110.0	17	163	2	40						
INDENO(1,2,3-CD)PYRENE	5.0	ND	100	107.8	ND	200	223.5	227.5	NA	107.8	5	171	NA	111.8	113.7	5	171	2	40						
DIBENZ(A,H)ANTHRACENE	5.0	ND	100	116.7	ND	200	242.7	247.1	NA	116.7	5	227	NA	121.3	123.6	5	227	2	40						
BENZO(G,H,I)PERYLENE	5.0	ND	100	109.6	ND	200	228.8	230.4	NA	109.6	5	219	NA	114.4	115.2	5	219	1	40						
SURROGATES																									
2-FLUOROPHENOL		52.1	100	39.2	44.0	100	35.2	37.7	52.1	39.2	21	100	44.0	35.2	37.7	21	100								
PHENOL - D6		34.8	100	26.6	28.4	100	24.1	25.3	34.6	26.6	10	94	28.4	24.1	25.3	10	94								
NITROBENZENE - D5		37.9	50	30.2	32.2	50	28.4	29.5	75.8	60.5	35	114	64.4	56.7	59.0	35	114								
2-FLUOROBIPHENYL		41.9	50	34.7	33.5	50	31.3	31.5	83.9	69.3	43	116	67.3	62.6	63.6	43	116								
2,4,6-TRIBROMOPHENOL		108.1	100	114.0	107.1	100	104.9	115.1	108.1	114.0	10	123	107.1	104.9	115.1	10	123								
p-TERPHENYL - D14		71.3	50	63.6	65.9	50	65.2	66.2	142.5	127.1	33	141	131.8	130.4	136.4	33	141					H			

NOTES & DEFINITIONS :

NS = NOT SPIKED

KEMRON ENVIRONMENTAL SERVICES

MARIETTA, OH

QUALITY CONTROL SUMMARY / 8081 WATERS , FRONT

INSTRUMENT : HP9

EXT'N DATE : 12/1/98 ANALYST : ECL BLK FLNM : 1522

EXT'N BENCH SHT : V105P85 RUN DATE : 12/4/98 LCS FLNM : 1523

EXT'N WORK GRP : WG49913 ANAL WORK GRP : WG50057

SAMPLE ID : NA

SMPL FLNM : NA

MS FLNM : NA

MSD FLNM : NA

COMPOUND	RDL	CONCENTRATION , ug/L					% RECOVERY								PERCENT		
		Blank	LCS	Sample	MS	MSD	Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	MS/MSD RPD	RPD Advsory Limits
ALPHA-BHC	0.05	ND	0.503	I ND	NA	NA	NA	100.6	37	134	NA	#######	#######	51	145	NA	0-43
GAMMA-BHC	0.05	ND	0.563	I ND	NA	NA	NA	112.6	32	127	NA	#######	#######	54	134	NA	0-18
BETA-BHC	0.05	ND	0.575	I ND	NA	NA	NA	115.0	17	147	NA	#######	#######	51	129	NA	0-28
HEPTACHLOR	0.05	ND	0.555	I ND	NA	NA	NA	111.0	34	111	NA	#######	#######	40	139	NA	0-37
DELTA-BHC	0.05	ND	0.623	I ND	NA	NA	NA	124.6	19	140	NA	#######	#######	56	138	NA	0-78
ALDRIN	0.05	ND	0.530	I ND	NA	NA	NA	106.0	42	122	NA	#######	#######	26	143	NA	0-88
HEPTACHLOR EPOXIDE	0.05	ND	0.572	I ND	NA	NA	NA	114.4	37	142	NA	#######	#######	51	135	NA	0-40
GAMMA-CHLORDANE	0.05	ND	NA	I ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40
ALPHA-CHLORDANE	0.05	ND	NA	I ND	NA	NA	NA	NA	54	119	NA	NA	NA	45	115	NA	0-17
ENDOSULFAN I	0.05	ND	0.392	I ND	NA	NA	NA	78.4	45	153	NA	#######	#######	37	123	NA	0-22
4,4-DDE	0.10	ND	0.566	I ND	NA	NA	NA	113.2	30	145	NA	#######	#######	64	152	NA	0-23
DIELDRIN	0.10	ND	0.612	I ND	NA	NA	NA	122.4	38	148	NA	#######	#######	23	171	NA	0-20
ENDRIN	0.10	ND	0.596	I ND	NA	NA	NA	119.2	30	147	NA	#######	#######	58	154	NA	0-28
4,4-DDD	0.10	ND	0.590	I ND	NA	NA	NA	118.0	31	141	NA	#######	#######	58	179	NA	0-30
ENDOSULFAN II	0.10	ND	0.419	I ND	NA	NA	NA	83.8	D	202	NA	#######	#######	21	117	NA	0-18
4,4-DDT	0.10	ND	0.584	I ND	NA	NA	NA	116.8	25	160	NA	#######	#######	42	168	NA	0-22
ENDRIN ALDEHYDE	0.10	ND	0.426	I ND	NA	NA	NA	85.2	NA	NA	NA	#######	#######	21	115	NA	0-40
ENDOSULFAN SULFATE	0.10	ND	0.425	I ND	NA	NA	NA	85.0	26	144	NA	#######	#######	31	117	NA	0-30
METHOXYCHLOR	0.50	ND	0.554	I ND	NA	NA	NA	110.8	NA	NA	NA	#######	#######	26	196	NA	0-19
ENDRIN KETONE	0.10	ND	0.483	I ND	NA	NA	NA	96.6	NA	NA	NA	#######	#######	NA	NA	NA	
Tech-CHLORDANE	1.00	ND	NA	I ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40
TOXAPHENE	1.00	ND	NA	I ND	NA	NA	NA	NA	41	126	NA	NA	NA	40	125	NA	0-40
SURROGATES																	
2,4,5,6-TETRACHLORO-M-XYLENE		14.9	15.4	I NA	NA	NA	74.3	76.8	33	154	NA	NA	NA	18	154		
DECACHLOROBIPHENYL		18.5	21.7	I NA	NA	NA	92.7	108.4	25	140	NA	NA	NA	25	140		

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 0.5 ug/L

SURROGATES spiked at 20 ug/L

NA = NOT APPLICABLE

DL = DILUTED OUT

ND = NOT DETECTED

RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE

MS=MATRIX SPIKE

MSD=MATRIX SPIKE DUPLICATE

KEMRON ENVIRONMENTAL SERVICES

MARIETTA, OH

QUALITY CONTROL SUMMARY / 8081 WATERS , REAR

INSTRUMENT : HP9

EXT'N DATE : 12/1/98 ANALYST : ECL BLK FLNM : 1522 SAMPLE ID : NA

EXT'N BENCH SHT : V105P85 RUN DATE : 12/4/98 LCS FLNM : 1523 SMPL FLNM : NA

EXT'N WORK GRP : WG49913 ANAL WORK GRP : WG50057 MS FLNM : NA

MSD FLNM : NA

COMPOUND	RDL	CONCENTRATION , ug/L					% RECOVERY									PERCENT		
		Blank	LCS	Sample	MS	MSD	Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	MS/MSD RPD	RPD Advisory Limists	Blank LCS Sample MS MSD
ALPHA-BHC	0.05	ND	0.537	ND	NA	NA	NA	107.4	37	134	NA	#######	#######	51	145	NA	0-43	# #
GAMMA-BHC	0.05	ND	0.599	ND	NA	NA	NA	119.8	32	127	NA	#######	#######	54	134	NA	0-18	# #
BETA-BHC	0.05	ND	0.576	ND	NA	NA	NA	115.2	17	147	NA	#######	#######	51	129	NA	0-28	# #
HEPTACHLOR	0.05	ND	0.579	ND	NA	NA	NA	115.8	34	111	NA	#######	#######	40	139	NA	0-37	H # #
DELTA-BHC	0.05	ND	0.655	ND	NA	NA	NA	131.0	19	140	NA	#######	#######	56	138	NA	0-78	# #
ALDRIN	0.05	ND	0.584	ND	NA	NA	NA	116.8	42	122	NA	#######	#######	26	143	NA	0-38	# #
HEPTACHLOR EPOXIDE	0.05	ND	0.626	ND	NA	NA	NA	125.2	37	142	NA	#######	#######	51	135	NA	0-40	# #
GAMMA-CHLORDANE	0.05	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-50	
ALPHA-CHLORDANE	0.05	ND	NA	ND	NA	NA	NA	NA	54	119	NA	NA	NA	45	115	NA	0-17	
ENDOSULFAN I	0.05	ND	0.418	ND	NA	NA	NA	83.6	45	153	NA	#######	#######	37	123	NA	0-22	# #
4,4-DDE	0.10	ND	0.648	ND	NA	NA	NA	129.6	30	145	NA	#######	#######	64	152	NA	0-23	# #
DIELDRIN	0.10	ND	0.691	ND	NA	NA	NA	138.2	36	146	NA	#######	#######	23	171	NA	0-20	# #
ENDRIN	0.10	ND	0.638	ND	NA	NA	NA	127.6	30	147	NA	#######	#######	56	154	NA	0-28	# #
4,4-DDD	0.10	ND	0.641	ND	NA	NA	NA	128.2	31	141	NA	#######	#######	58	179	NA	0-30	# #
ENDOSULFAN II	0.10	ND	0.449	ND	NA	NA	NA	89.8	D	202	NA	#######	#######	21	117	NA	0-18	# #
4,4-DDT	0.10	ND	0.685	ND	NA	NA	NA	137.0	25	160	NA	#######	#######	42	168	NA	0-22	# #
ENDRIN ALDEHYDE	0.10	ND	0.483	ND	NA	NA	NA	96.6	NA	NA	NA	#######	#######	21	115	NA	0-40	# #
ENDOSULFAN SULFATE	0.10	ND	0.501	ND	NA	NA	NA	100.2	26	144	NA	#######	#######	31	117	NA	0-30	# #
METHOXYCHLOR	0.10	ND	0.678	ND	NA	NA	NA	136	NA	NA	NA	#######	#######	26	196	NA	0-19	# #
ENDRIN KETONE	0.50	ND	0.569	ND	NA	NA	NA	114	NA	NA	NA	#######	#######	NA	NA	NA		
Tech-CHLORDANE	1.0	ND	NA	ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40	
TOXAPHENE	1.0	ND	NA	ND	NA	NA	NA	NA	41	126	NA	NA	NA	40	125	NA	0-40	
SURROGATES																		
2,4,5,6-TETRACHLORO-M-XYLENE		17.0	16.2	NA	NA	NA	84.9	81.0	13	154	NA	NA	NA	13	154			
DECACHLOROBIPHENYL		21.6	26.0	NA	NA	NA	107.9	130.2	25	140	NA	NA	NA	25	140			

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 0.5 ug/L — LCS=LABORATORY CONTROL SAMPLE

SURROGATES spiked at 20 ug/L — MS=MATRIX SPIKE

NA = NOT APPLICABLE — MSD=MATRIX SPIKE DUPLICATE

DL = DILUTED OUT

ND = NOT DETECTED

RDL=REPORTING DETECTION LIMIT

KEMRON ENVIRONMENTAL SERVICES
MARIETTA, OH
QUALITY CONTROL SUMMARY / PCB WATERS , FRONT

INSTRUMENT : HP10
EXT'N DATE : 12/1/98 | ANALYST : CDB | BLK FLNM : 002F0101 | SMPL ID : 12-007-01
EXT'N BENCH SHT : V105P86 | RUN DATE : 12/2/98 | LCS FLNM : 003F0101 | SMPL FLNM : 004F0101
EXT'N WORK GRP : WG49914 | ANAL WORK GRP : WG49924 | LCS Dup FLNM : NA | MS FLNM : 005F0101
MSD FLNM : 006F0101

COMPOUND	RDL	CONCENTRATION , ug/L					% RECOVERY									PERCENT						
		Blank	LCS	Sample	MS	MSD	Blank	LCS	LCS LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	MS/MSD RPD	RPD Advisory Limits	Blank	LCS	Sample	MS	MSD
AROCLOR 1016	0.5	ND	3.39	ND	6.74	6.88	NA	136	48	125	NA	135	138	48	125	2.0	NA		H		H	H
AROCLOR 1221	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1232	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1242	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1248	0.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
AROCLOR 1254	1.0	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0-40					
AROCLOR 1260	1.0	ND	3.30	9.38	15.2	19.4	NA	132	59	122	NA	117	201	59	122	24.4	NA		H			H
SURROGATES																						
2,4,5,6-TETRACHLORO-M-XYLENE		0.156	0.175	0.134	0.348	0.370	79.5	87.5	13	154	67.0	87.0	92.5	13	154							
DECACHLOROBIPHENYL		0.154	0.224	0.128	0.400	0.372	77.0	112	25	140	64.0	100	93.0	25	140							

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at .25 ug/kg
SURROGATES spiked at .0200 ug/kg
NA = NOT APPLICABLE
DL = DILUTED OUT
ND = NOT DETECTED
RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE
MS=MATRIX SPIKE
MSD=MATRIX SPIKE DUPLICATE

ENVIRONMENTAL SERVICES

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Contact: Jessica Farrar

Turn Around Requirements:

Project No.:

Project Name: Pedrickstown

Sampler (print): EK

Signature: EK

Sample I.D. No.	Comp*	Grab	Date	Time	Protocol CWA	Protocol SW846	NUMBER OF SAMPLES	Hold	VOC	SVOC	Pest/PCB	TSS	TEMP BLANK	ADDITIONAL REQUIREMENTS
WEIR 1124		X	11/24/98			X			1	X	X			
BG 1116		X	11/16/98			X				1	1			
BG 1119		X	11/19/98			X			1	1	1			
~~BG 1125~~														
EB 112598		X	11/25/98			X			1	1	1			
WEIR 112498			11/24/98									1		
WEIR 1123			11/23/98									1		
WEIR 1122			11/22/98									1		
WEIR 1121			11/21/98									1		
WEIR 1120			11/20/98									1		
WEIR 119			11/19/98									1		
TEMP BLANK														

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
JS Farrar	11/30						

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:
			Glenda Gregory	12/1/98	1002	C of C Dated Sp intact / Cooler Temp 5.0

*Homogenize all composite samples prior to analysis

White – Lab Yellow – Office Pink – Field

Work Order L9812010 Client VEI-MD #of Samples 10 Due Date 12/15 Page 1

Sample #	Analyses	Reason	Removed By ADT	Removed From	MovedTo	Reliq. By	Ret'd by ADT	Ret'd To	Rec'd By	Reason
5-10	TSS	Anal	DLN 12/01/98 @1600	WalkIn	Wet	BJG	DLN 12/2/98 @0950	Archive	BJG	Archive
01-04	PCB/PEST	Ext	CEB 12/01/98 @1625	WALKIN	ELAB	BJG	[illegible]	Dumpster	BJG	Disposed
01-04	BNA	Ext	CEB 12/02/98 @1310	WALKIN	ELAB	BJG	[illegible]	Dumpster	BJG	Disposed
01,03,04	8260	analysis	gH 12/3/98 @1240	U-1	VOA	BJG	gH 12/10/98 @1245	archive	BJG	Archive

APPENDIX C

Pedricktown North Confined Disposal Facility High Resolution Polychlorinated Biphenyls Laboratory Results

MRI

Analysis of Water Samples for Mono-ortho, Di-ortho and Coplanar Congener-Specified PCBs

Final Report

For Versar

MRI Project No. 5356

February 26, 1999

Midwest Research Institute

425 Volker Boulevard
Kansas City, Missouri
64110-2299
(816) 753-7600

solutions through science and technology

MRI

Analysis of Water Samples for Mono-ortho, Di-ortho and Coplanar Congener-Specific PCBs

Final Report

For Versar
9200 Rumsey Road
Columbia, Maryland 21045

Attn: Jessica Schulman Farrar

MRI Project No. 5356

February 26, 1999

Midwest Research Institute • 425 Volker Boulevard • Kansas City, Missouri 64110-2299

Preface

This final report provides the results of the analysis of 24 water samples from the Pedricktown, New Jersey site in support of a Philadelphia Corps of Engineers study to determine trace levels of congener-specific polychlorinated biphenyls (PCBs) from dredging operations. The samples were collected by Versar, Inc., to investigate trace levels of these contaminants in the dredge site influent, dredge site weir discharge, and the dispersion area. Background samples also were analyzed.

The samples were prepared for analysis by Mr. Jamie Fox. The HRGC/LRMS analyses for mono-ortho and di-ortho congener-specific PCBs were performed by Mr. Mike Molloy, and the HRGC/HRMS coplanar PCB analyses were performed by Mr. Mark Davis. Ms. Kathy Boggess reviewed the analytical data and prepared this report.

MIDWEST RESEARCH INSTITUTE

Kathy Boggess

Kathy E. Boggess
Principal Chemist

Approved:

John D. Witt

for Thomas M. Sack, Ph.D.
Director
Chemical Sciences Division

February 26, 1999

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Section 1.
Introduction

Midwest Research Institute (MRI) was contracted by Versar, Inc., to provide congener specific and total PCB analysis of 24 water samples collected from dredging operations at the Pedricktown, New Jersey site. These environmental water samples were submitted to MRI for analysis in support of Versar's contract with the Philadelphia Corps of Engineers. Samples were designated with unique sample codes and the specific prefixes of these codes were used to identify specific sampling locations. Sample codes with an "inlet" prefix were collected from the dredge site influent and sample codes with a "weir" prefix were collected from the dredge site weir discharge. Samples codes containing "mix" designated samples from the dispersion area and samples with a "BG" code were described as background samples.

The technical approach and scope of work for the study were presented to Versar, Inc., in MRI Proposal 0918-158R, dated October 16, 1998. The scope of work included high resolution gas chromatography/low resolution mass spectrometry (LRMS) analysis for 71 selected mono-ortho and di-ortho PCB congeners. Total PCB concentrations were determined based on the sum of congeners detected for mono through deca PCB homologs.

In addition to the HRGC/LRMS analyses, the samples were analyzed for the four non-ortho coplanar PCBs using high resolution gas chromatography/high resolution mass spectrometry (HRGC/HRMS) to achieve (pg/L) detection limits. Because coplanar PCBs are typically detected at significantly lower concentrations than the more prevalent mono-ortho and di-ortho PCBs, the coplanar PCB analysis required a separate cleanup and analysis procedure including high resolution mass spectrometry (HRMS) analysis. The HRGC/HRMS analytical method used by MRI was developed through previous studies as a modification of EPA SW-846 Method 8290 and Draft method 1668 to allow simultaneous analysis of the coplanar PCBs with polychlorinated dioxins and furans. In this study, only the coplanar PCBs are reported.

This report describes the methods used to prepare and analyze aqueous samples. Section 2, entitled Experimental Approach, discusses receipt of the samples by MRI, sample code assignments, analytical standards, sample preparation procedures, HRGC/LRMS analysis, HRGC/HRMS analysis, and data reduction.

Section 3, Results, presents sample results and internal quality control results. Quality control results include instrument calibration, method blanks, control spikes, and the percent recoveries for the carbon-13 internal quantitation standards and surrogate standards.

Section 2.
Experimental Approach

This section describes sample receipt, analytical standards, sample preparation procedures, instrumental analysis, and data reduction.

2.1 Sample Receipt

The sample collection, study design, and shipment of samples to MRI were coordinated by Ms Jessica Schulman Farrar, Versar. The samples were received in three separate shipments on October 23, November 4, and December 1, 1998. The samples were received cold and in good condition with the exception of a cracked lid noted for Sample Weir 1102. The cracked lid was not believed to compromise the sample integrity. Samples were refrigerated at 4°C until sample preparation was initiated.

MRI's sample receipt documentation, including a sample receipt checklist and sample transaction logs generated by Mr. Mike Cheramy, MRI Sample Custodian, are provided in Appendix A. Sample description on the chain-of-custody forms were compared to the sample container labels. Three discrepancies were resolved with Ms. Farrer on December 8 via e-mail correspondence. The first issue was the sample listed as EB112578 on the chain-of-custody form. This sample was labeled as EB112598 on the sample container. Ms. Farrar advised MRI that EB112598 is the correct field sample code. The second discrepancy was with regard to the spelling of the sample code prefix "weir." The codes were spelled as "wier" on the sample bottles. MRI was advised that weir is the correct code. The third discrepancy was the crossed off sample code MIX1119 on the chain-of-custody form for the sample set received on December 1. Two coolers were received with this shipment and the sample identified as MIX1119 was intended to be listed in the second cooler. MRI was advised to proceed with analysis of this sample.

The samples were identified by their field number and assigned a unique MRI barcode number for identification during sample preparation and analysis. Both the field number and unique MRI bar code are used to report sample results.

2.2 Analytical Standards

Analytical standards were prepared for each of the target analytes shown in Tables 1 and 2. Individual stock solutions of each analyte were purchased from Cambridge Isotope Laboratories, Woburn, Massachusetts and Ultra Scientific, Hope, Rhode Island.

Isotopically labeled analogs of representative PCB congeners were used as internal quantitation standards, surrogates, and internal standards The analytical standards

discussed in this section are presented as those used for HRMS analysis or those used for LRMS analysis.

2.2.1 Coplanar PCB Analytical Standards (HRMS)

The coplanar PCB standards include native standards for quantitation of two tetra-coplanar PCBs (Congeners 77 and 81), one penta-PCB (Congener 126), and one hexa-PCB (Congener 169). Corresponding $^{13}C_{12}$-isotopes for each congener include $^{13}C_{12}$-3,3',4,4'tetra-PCB (Congener 77), $^{13}C_{12}$-3,4,4',5 tetra-PCB (Congener 81), $^{13}C_{12}$-3,3'4,4',5 CB (Congener 126), and $^{13}C_{12}$-3,3'4,4,',5,5'hexa-PCB (Congener 169). Native spiking solutions, surrogate spiking solutions, and instrument calibration solutions were prepared from mixed stock solutions. The calibration standards include native PCBs over a concentration range from 5.0 to 500 pg/µL with the concentration of isotopes constant at 100 pg/µL as shown in Table 3. The $^{13}C_{12}$-1,2,3,4 TCDD shown in Table 3 is used as a recovery standard.

2.2.2 Congener-Specific PCB Standards (LRMS)

Aliquots of the individual stock solutions of native PCBs (Table 2) were combined to prepare a mixed stock spiking solution. A mixed surrogate spiking solution was prepared by combining aliquots of the individual ^{13}C-PCBs stock standard solutions. The ^{13}C-PCB surrogates included representative congeners from the mono-, tri, tetra-, hexa-, octa-, and deca-PCB homologs. Aliquots of the native PCB congeners shown in Table 2, surrogate spiking solutions, and an internal standard solution containing d_6-tetra PCB were combined to prepare instrument calibration standards over the concentration range shown in Table 4.

2.3 Sample Preparation Procedures

The analytical procedures used for extraction of the samples have been extensively evaluated at MRI through previous studies, including the study conducted by MRI as Project 4615, January 3, 1997, for the Philadelphia to the Sea Navigation Channel study and the subsequent study for the Chesapeake and Delaware Canal, MRI Project 4865, February 26, 1998. The procedures used for sample preparation were based on EPA Method 8290 and were consistent with EPA SW-846 Methods 3510 C and 3540 C specific to separatory funnel and Soxhlet extractions. The cleanup procedures used were modifications of procedures specified in EPA Method 8290 that MRI has used routinely for PCB analysis as well as for dioxins and furans.

After extraction, the samples were put through a sulfuric acid partitioning cleanup followed by acid/neutral silica gel chromatography cleanup described in Method 8290. Then the extracts were split into two equal portions. The coplanar PCB split was

processed through additional chromatography cleanup procedures including neutral alumina and AX-21 carbon.

2.3.1 Percent Solids Determination

The four samples with an "inlet" prefix were described by the MRI analyst as having a high solid content. The routine separatory funnel extraction procedures used for liquid-liquid extraction could not be applied to these samples. A total percent solids determination was conducted for each of the samples. For the inlet samples, the sample was homogenized and a representative slurry sample was removed for the percent solids determination. A 5-mL aliquot was removed from the sample container and the weight was determined to the nearest 0.0001 g. The sample was placed in a 110°C drying oven and dried to constant weight. The weight of the dried reside was compared to the weight of the 5 mL aliquot and the percent total solids was calculated. The percent solids for the inlet samples ranged from 4% to 6 %. The percent solids results for the remaining samples were < 1%.

The suspended solids in the inlet samples were such that a liquid-liquid separatory funnel extraction was not feasible. Therefore, these samples were split into liquid and solid phases for extraction. The aqueous portion was extracted by separatory funnel and the solid portion was Soxhlet extracted. The two extracts were then combined for sample cleanup. The ratio of solids to liquids in the original sample was then used in the final calculations to report concentrations based on the proportions of a liquid/solid slurry mixture. For example, a sample that contained 6% solids was theoretically comprised of 60 g solids and 940 mL water.

After extraction, the samples were put through a sulfuric acid partitioning cleanup procedure followed by an acid/neutral silica gel chromatography cleanup described in EPA Method 8290. At this point, the extracts were split into two equal portions. One portion was analyzed for mono and di-ortho PCBs using high resolution mass spectrometry/low resolution mass spectrometry (HRGC/LRMS). The other half of the extract split that was designated for coplanar PCBs was put through additional cleanup procedures including neutral alumina and AX-21 carbon chromatography described in EPA Method 8290. The extract from this split was analyzed by high resolution mass spectrometry/high resolution mass spectrometry (HRGC/HRMS).

Specific applications of the procedures used for the inlet and the other aqueous samples are discussed in the following sections of this report.

2.3.2 Mono-ortho and Di-ortho PCBs (HRGC/LRMS)

The water samples were prepared for HRGC/LRMS PCB analysis using separatory funnel extractions with methylene chloride and the solid phase of the four inlet samples were prepared using Soxhlet extraction equipped with a Dean Stark with toluene as the

extraction solvent. The 24 water samples were prepared in two batches and the solid phases of the four inlet samples were prepared in a separate batch. Quality control samples prepared with each batch included a method blank, and duplicate laboratory control spiked samples. The matrices were Milli-Q® water and Quartz sand for the spiked QC samples.

The sample size was 1-liter for the aqueous samples and 10g on a dry weight basis for the inlet sediments. The field samples and quality control samples were fortified with ^{13}C surrogate standards shown in Table 5. In addition to the $^{13}C_{12}$ surrogate standards, the laboratory control spikes and duplicate matrix spike samples were spiked with native target analytes. The samples were also spiked with the $^{13}C_{12}$- coplanar PCB internal quantitation standards for simultaneous extraction for subsequent HRGC/HRMS analysis.

The aqueous samples (1-liter) were extracted with three 60 mL portions methylene chloride. The sediment phase of each inlet sample was placed in a Soxhlet extractor and extracted for at least 16 hr with toluene. The extracts from both types of extractions were filtered through a bed of sodium sulfate, and solvent exchanged to hexane. The hexane extract (~ 15 mL) was subjected to sulfuric acid partitioning. The recovered hexane extract was then put through a sulfuric acid modified silica gel/neutral silica gel chromatography cleanup procedure.

After cleanup was completed, each hexane sample extract was concentrated to 10 mL and split into two 5-mL portions. One split was set aside for additional cleanup for HRMS analysis (Section 2.3.3). The other 5-mL split for mono- through deca-congener-specific PCB analysis was concentrated to 1.0 mL hexane, and an internal standard solution containing d_6 tetra-PCB was added to a final concentration of 200 ng/mL. The extracts were stored at 4°C in the refrigerator until ready for HRGC/LRMS analysis.

2.3.3 Coplanar PCBs (HRGC/HRMS)

The samples for HRGC/HRMS analysis required the same extraction procedures as used for HRGC/LRMS analysis, but clean-up steps were more extensive. The samples were extracted using the procedures discussed in Section 2.3.2.

After extraction, the samples for coplanar PCB analyses were subjected to the same sulfuric acid partitioning and neutral/acid silica gel chromatography column cleanup as described for the mono ortho and di-ortho PCBs. Then, the extracts were split into two equal 5-mL portions. The 5-mL portion designated for coplanar PCB analysis was put through additional column chromatography cleanup steps including neutral alumina and AX21-carbon/Celite, as specified in Method 8290.

Following the final cleanup, the extracts were concentrated under prepurified nitrogen to 100 µL, and 10 µL of a recovery standard solution containing $^{13}C_{12}$-1,2,3,4-TCDD and $^{13}C_{12}$-1,2,3,7,8,9-HxCDD in tridecane was added. The evaporation was

continued until a volume of 10 µL was reached. The recovery standard was used to calculate absolute recoveries of the IQS standards. Sample extracts were transferred to refrigerated storage (4°C) until ready for HRGC/HRMS analysis.

2.4 HRGC/LRMS Analysis—Mono-ortho and Di-ortho PCBs

The HRGC/LRMS analyses for 71 congener-specific PCBs were performed using a Fisons MD 800-E quadrupole mass spectrometer operated in the full scan mode with the operating parameters given in Table 7. The instrument was tuned according to manufacturer's specifications, and decafluorotriphenyl phosphate (DFTPP) was analyzed at the beginning of each 12-hr day that samples were analyzed to ensure proper mass assignments. A PCB window defining mix, containing the first and last eluting congeners for each homolog group, was analyzed to determine appropriate quantitation windows for total PCB analysis.

Initial calibration of the instrument was performed with the analytical standards described in Section 2.2 over a minimum of five points. Continuing calibration included a beginning-of-the-day and end-of-the-day standard to ensure stable instrument performance. Calibration criteria included an average response factor precision of less than 20% relative standard deviation (RSD) for the initial curve. Daily calibration response factors were required to be within ± 25% of the mean RRF from the initial curve. Initial and continuing calibration standards met the performance criteria.

2.5 HRGC/HRMS Analysis—Coplanar PCBs

The coplanar PCBs are typically detected at concentrations much lower than the more prevalent mono- and di-ortho-substituted PCBs. Because of these differences in concentrations, it was necessary to conduct the analysis for coplanar PCBs separate from the other PCB analysis. The analysis for coplanar PCBs was performed using modifications of Method 8290 with analytical conditions established at MRI through previous studies. A VG70 250 S HRMS instrument operated with mass resolution > 10,000 was used for the analyses with the operating conditions shown in Table 8.

The instrument was tuned according to manufacturer's specifications, and a mass resolution check was performed at the beginning of each 12-hr day that samples were analyzed. Initial calibration of the instrument was performed with the analytical standards described in Section 2.2 over a minimum of five points. Continuing calibration included a beginning-of-the-day standard followed by a tridecane blank to ensure no carryover in the analytical system. An end-of-the-day standard was analyzed to ensure stable instrument performance. Calibration criteria included an average response factor precision of less than 20% RSD for the initial curve. Daily calibration response factors were required to be within ± 20% of the mean RRF from the initial curve for native isomers and ± 25% for internal quantitation standards. The initial and continuing calibration criteria were met.

2.6 Congener-Specific PCB LRMS Data Reduction

The data from the congener-specific PCB and total PCB analyses were reduced using Lab Base software to calculate the concentration for analyte responses in the appropriate mass windows having ion abundance ratios within ± 20% of the theoretical ratios. The PCB quantitation and theoretical ion abundance ratio criteria are specified in EPA Method 680.

For qualitative identification, detected peaks were required to meet the ion ratio criteria and to fall within ± 0.5 min of the established retention time windows from analysis of daily calibration standards. The order of elution for congener-specific PCBs has been determined during previous MRI studies and from the literature.[1]

For peaks positively identified as congener-specific PCBs, the computer program calculates an extract concentration; then the sample weights, extract volumes, and dilution factors are taken into account to arrive at a final sample concentration.

The calculation formulas are shown in the following equations:

$$\text{relative response factor} = \text{RRF} = \frac{\text{Area}_{\text{STD}} \times \text{Conc}_{\text{IS}}}{\text{Conc}_{\text{STD}} \times \text{Area}_{\text{IS}}} \qquad \text{Eq. (1)}$$

where: area = sum of the area for the primary and secondary masses characteristic of the analyte standard or internal standard, and
conc = the concentration (ng/mL) of internal standard or standard.

$$\text{ng/L Sample} = \left(\frac{\text{Area}_{\text{sample}} \times \text{Conc}_{\text{IS}}}{\text{Area}_{\text{IS}} \times \text{RRF}}\right) \times \frac{v_e}{v_s} \times \text{SF} \qquad \text{Eq. (2)}$$

where: v_e = final volume of extract (mL),
v_s = is volume of sample extracted (liters), and
SF = split factor = 2.

Total homolog PCB results were determined in addition to the congener-specific data. Quantitation windows for the mono- through deca-PCB homologs were established from the analysis of a window-defining standard that contains the first and last eluting congener for each homolog. As a result of the extensive target congener analyte list, all responses observed were identified as specific congeners. For each homolog group, the individual congeners detected above the lowest calibration standard were summed. Total PCBs were calculated by summing the mono through deca homolog concentrations.

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[1] Erickson, M. D., *Analytical Chemistry of PCBs*, Lewis Publishers, Inc. (1992).

Limits of detection for analytes not positively identified were based on the lowest calibration standard (12.5 ng/mL). The estimated maximum possible concentration (EMPC) was calculated for background interferences that masked response for the target analyte, resulting in a qualitative ion ratio that was outside the theoretical ratio acceptance limits.

The concentrations of the isotopically labeled surrogate compounds added to each sample were determined the same as for the native analytes. The amount found was compared to the amount spiked, and the percent recovery was calculated. The native concentrations were not adjusted for surrogate recovery.

2.7 Coplanar PCB Data Reduction

A software application program developed by MRI was used to calculate the concentrations of coplanar PCBs, based on the isotope dilution approach, which adjusts the concentration of the native analyte for recovery of the internal quantitation standards (IQS) from the sample matrix. Qualitative identification requires the target analyte response to be within a specific retention time, and the quantitation ions must be within ± 20% theoretical ratio criteria. Exact masses for tetra-, penta-, and hexa-PCBs were calculated by the HRMS data system.

The instrument was calibrated with the series of calibration standards given in Table 3. Relative response factors (RRFs) were determined for each native compound relative to the corresponding ^{13}C-labeled internal quantitation standard (IQS) (Equation 3) and for each IQS relative to the recovery standard (RS) (Equation 4). The mean RRFs from the initial calibration curve were then used in subsequent calculations to determine sample amounts for each specific isomer or IQS. The RRF for analytes is calculated using the following equation:

$$RRF = \frac{A_{STD} \times C_{IS}}{A_{IS} \times C_{STD}} \qquad \text{Eq. (3)}$$

where: A_{STD} = the sum of the area responses for the two characteristic ions of the native standard;
A_{IS} = the sum of the area responses for the two characteristic ions of the corresponding internal quantitation standard;
C_{IS} = concentration (pg/µL) of the internal quantitation standard; and
C_{STD} = concentration (pg/µL) of the native standard.

The RRF for internal standards, RRF_{IS}, is calculated as:

$$RRF_{IS} = \frac{A_{IS} \times C_{RS}}{A_{RS} \times C_{IS}} \qquad \text{Eq. (4)}$$

where A_{IS} and C_{IS} are defined as in Equation 3 and
C_{RS} = concentration (pg/µL) of the internal recovery standard, and
A_{RS} = the sum of the area responses for the two characteristic ions corresponding to the recovery standard.

The coplanar PCB detection limits were based on 2.5 times the instrumental noise, adjusted for sample weight and extract volume. In some cases, the detection level is shown as an estimated maximum possible concentration (empc) attributed to coelution of interferences resulting in a failed ion ratio criterion.

As discussed in the Sample Preparation Section, known amounts of IQS are added to the samples before extraction, and the IQS concentration in the final extract is used to calculate the concentration of the native analytes in the final extract as an isotope dilution calculation technique. This calculation procedure (Equation 5) adjusts for recovery from the sample matrix.

$$C = \frac{A_{sample} \times Q_{IS} \times V_e}{A_{IS} \times RRF \times V_s} \times SF \qquad \text{Eq. (5)}$$

where: C = (pg/L) or concentration of the native analyte;
A_{sample} = sum of the area responses for the two characteristic ions of the analyte;
Q_{IS} = concentration (pg/µL) of the internal quantitation standard added to the sample;
V_e = final extract volume (µL);
A_{IS} = sum of the area responses for the two characteristic ions of the respective internal quantitation standard;
RRF = the average of the initial calibration relative response factors from Equation 3;
V_s = volume of sample (liters) extracted or weight of sample extracted (grams); and
SF = split factor = 2.

$$\text{Recovery (\%)} = \frac{A_{IS} \times Q_{RS}}{A_{RS} \times RRF_{IS} \times Q_{IS}} \times 100 \qquad \text{Eq. (6)}$$

where: A_{RS} = sum of the area responses for the two characteristic ions of the internal recovery standard;
Q_{RS} = amount of the internal recovery standard added to the final extract; and
RRF_{IS} = the average of initial calibration response factors from Equation 4.

The recovery standards which are added to the sample at the final concentration step are used to establish the absolute recovery of the carbon-13 internal standards (Equation 6). The IQS recoveries are used to access overall method performance and adjust the results for native compounds.

2.8 Inlet Sample Calculations

The inlet samples that were determined to contain high concentrations of solids were split into two phases for extraction. The sample extracts were analyzed separately for the water and the sediment portion. Then, the ratio of sediment to water in the original sample was used to calculate the PCB concentration in the inlet slurry sample. This was accomplished in the following equations.

Sediment slurry component (pg/L) = analyte pg/g dry sediment basis
x g dry sediment/L slurry ratio

For example,

Inlet sample 1102 contained 1.90 % dry sediment and 98.1% aqueous phase

The 1.9 % dry sediment corresponds to 19 g/ Liter in the inlet sample

Sediment slurry component (pg/L) = analyte pg/g dry basis X 19 g/L ratio

Aqueous slurry component (pg/L) = analyte pg/L water X .98 L/L

Total slurry concentration (pg/L) = sediment slurry
component + Aqueous slurry component

Section 3.
Results

This section provides the field sample results and quality control sample results. Field sample results include coplanar PCBs, mono-ortho and di-ortho congener-specific PCBs and total PCBs. Quality control sample results include method blanks, laboratory control spikes, matrix spikes, surrogate recoveries, and internal quantitation standard recoveries. Summary data tables containing field sample results were reported to Versar electronically on January 15, 1999. There are no changes to the data reported previously.

3.1 Coplanar PCB Results

The coplanar PCB results for the aqueous samples are presented in Table 9 and the inlet solid and aqueous phase results are summarized in Table 10. The coplanar PCB concentrations in the dry sediment recovered from the inlet samples and the calculated concentrations for the sediment contribution in the water and slurry mixture are presented. For one of the inlet samples, inlet 110598, only the concentration from the solid portion is reported because the aqueous phase extract was spilled during sample cleanup. This value represents the minimum concentrations of PCBs in the sample. The aqueous phase although not available, would contribute significantly less to the total concentration in the original inlet sample than the solid phase.

Detection limits are given for analytes not detected. Estimated maximum possible concentration (empc) detection limits are attributed to coeluting interferences that mask response for the target analytes.

3.2 HRGC/LRMS Congener-Specific PCBs

The congener-specific PCB sediment sample results determined by HRGC/LRMS are summarized in Table 11 for the aqueous samples and in Table 12 for the inlet samples. None of the aqueous samples, including the aqueous phases of the inlet samples, contained PCBs above the 25 ng/L reporting limit. Therefore, the inlet sample results shown in Table 12 are based only on the proportion of solids that accounted for detectable PCBs in the inlet samples. The corresponding total Homolog PCBs for the aqueous and inlet sample are summarized in Tables 13 and 14, respectively.

For compounds not detected, the detection limit based on the lowest calibration standard is shown in Tables 11 through 14. The percent solids for the sample is shown in the sample results header for each sample along with the field ID and MRI barcode

In cases where two congeners were not completely resolved chromatographically, the calibration was based on the sum of the coeluting congeners, and the results are shown as a congener pair.

3.3 Coplanar PCBs Quality Control Sample Results

The method blank results for the coplanar PCBs are presented in Tables 9 and 10 for comparison to sample results. Because of the low detection limits achieved by HRGC/HRMS there were detectable quantities of tetra coplanar PCBs 77 and 81 in the water blanks. Sample concentrations for PCB 81 were near the blank background levels. Tetra PCB 77 was detected in seven of the samples at concentrations at least three times the blank values. The remaining samples were close to the method blank values for PCB 77.

The laboratory control spike recovery results are presented in Table 15. These results demonstrate good batch-to-batch precision and method reproducibility for the aqueous and sediment sample preparation and analysis procedures. Recoveries were well within the 70% to 130% recovery objective.

Other quality control sample results include the absolute recoveries of the $^{13}C_{12}$ IQS added to each field sample and quality control sample before extraction. Tables 16 and 17 summarize the recoveries and show the mean recovery and standard deviation precision for aqueous and sediment matrices. Statistical performance charts for the coplanar internal quantitation standards, $^{13}C_{12}$ PCB 77, $^{13}C_{12}$ PCB 81, $^{13}C_{12}$ PCB 126, and $^{13}C_{12}$ 169, and are provided in Appendix B. The mean recovery and method performance limits based on two standard deviations from the mean are shown for each sample.

3.4 Congener Specific PCB Quality Control Sample Results

The quality control samples for the congener specific PCBs analysis conducted by HRGC/LRMS included method blanks, laboratory control spikes, and surrogate recoveries. No PCBs were detected in the method blanks as shown in Tables 11 through 14. Laboratory control spike (LCS) recoveries are presented in Table 18 for three batches of samples. The first two sample batches included aqueous LCS samples and the third batch included sediment LCS samples. Recoveries were within the 50% to 150% recovery objective for all 71 congeners.

The PCB surrogate recoveries for each of the field sample and quality control samples are summarized in Tables 19 and 20. Individual sample recoveries for each surrogate were evaluated statistically relative to 2 standard deviations from the mean. Method performance charts are provided in Appendix C. Statistical control limits based on 2 standard deviations from the mean recovery were used to evaluate method performance. Lower recoveries were observed for $^{13}C_{12}$ deca PCB surrogate in the field samples compared to the quality control samples for the sediment samples. These lower recoveries were attributed to sample matrix affects rather than systematic method performance difficulties. The overall performance of the method was judged acceptable for all three sample batches.

Table 1. Non-Ortho Coplanar PCB Congeners Substituted in Both Para and Two or More META Positions

IUPAC number	Structure	Homolog group	Target detection limit (pg/L)
77	3,3',4,4'	Tetra-CB	25
81	3,4,4',5	Tetra-CB	25
126	3,3',4,4',5	Penta-CB	25
169	3,3',4,4 ,5,5'	Hexa-CB	25

Table 2. Mono-ortho and Di-ortho Targeted PCB Congeners for LRMS

IUPAC number	Structure	Homolog group	Target detection limit (ng/L)
8	2,4'	Di-CB	25
18	2,2',5	Tri-CB	25
28	2,4,4'	Tri-CB	25
37	3,4,4'	Tri-CB	25
42	2,2',3,4'	Tetra-CB	25
44	2,2',3,5'	Tetra-CB	25
47	2,2',4,4'	Tetra-CB	25
49	2,2',4,5'	Tetra-CB	25
52	2,2',5,5'	Tetra-CB	25
60	2,3,4,4'	Tetra-CB	25
64	2,3,4',6	Tetra-CB	25
66	2,3',4,4'	Tetra-CB	25
70	2,3',4',5	Tetra-CB	25
74	2,4,4',5	Tetra-CB	25
80	3,3',5,5'	Tetra-CB	25
82	2,2',3,3',4	Penta-CB	25
84	2,2',3,3',6	Penta-CB	25
86	2,2',3,4,5	Penta-CB	25
87	2,2',3,4,5'	Penta-CB	25
91	2,2',3,4',6	Penta-CB	25
92	2,2',3,5,5'	Penta-CB	25
95	2,2',3,5',6	Penta-CB	25
97	2,2',3',4,5	Penta-CB	25
99	2,2',4,4',5	Penta-CB	25
101	2,2',4,5,5'	Penta-CB	25
105	2,3,3',4,4'	Penta-CB	25
110	2,3,3',4',6	Penta-CB	25
114	2,3,4,4',5	Penta-CB	25
118	2,3',4,4',5	Penta-CB	25
119	2,3',4,4',6	Penta-CB	25
120	2,3',4,5,5'	Penta-CB	25
123	2',3,4,4',5	Penta-CB	25
127	3,3',4,5,5'	Penta-CB	25
128	2,2',3,3',4,4'	Hexa-CB	25
137	2,2',3,4,4',5	Hexa-CB	25
138	2,2',3,4,4',5'	Hexa-CB	25
141	2,2',3,4,5,5'	Hexa-CB	25
146	2,2',3,4',5,5'	Hexa-CB	25
149	2,2',3,4',5',6	Hexa-CB	25
151	2,2',3,5,5',6	Hexa-CB	25
153	2,2 ,4,4 ,5,5	Hexa-CB	25
156	2,3,3',4,4',5	Hexa-CB	25

Table 2 (Continued)

IUPAC number	Structure	Homolog group	Target detection limit (ng/L)
157	2,3,3',4,4',5'	Hexa-CB	25
158	2,3,3',4,4',6	Hexa-CB	25
166	2,3,4,4',5,6	Hexa-CB	25
167	2,3',4,4',5,5'	Hexa-CB	25
168	2,3',4,4',5',6	Hexa-CB	25
170	2,2',3,3',4,4',5	Hepta-CB	25
171	2,2',3,3',4,4',6	Hepta-CB	25
174	2,2',3,3',4,5,6'	Hepta-CB	25
177	2,2',3,3',4',5,6	Hepta-CB	25
179	2,2',3,3',5,6,6'	Hepta-CB	25
180	2,2',3,4,4',5,5'	Hepta-CB	25
183	2,2',3,4,4',5',6	Hepta-CB	25
185	2,2',3,4,5,5',6	Hepta-CB	25
187	2,2',3,4',5,5',6	Hepta-CB	25
189	2,3,3',4,4',5,5'	Hepta-CB	25
190	2,3,3',4,4',5,6	Hepta-CB	25
191	2,3,3',4,4',5',6	Hepta-CB	25
194	2,2',3,3',4,4',5,5'	Octa-CB	25
195	2,2',3,3',4,4',5,6	Octa-CB	25
196	2,2',3,3',4,4',5',6	Octa-CB	25
198	2,2',3,3',4,5,5',6	Octa-CB	25
200	2,2',3,3',4,5',6,6'	Octa-CB	25
201	2,2',3,3',4',5,5',6	Octa-CB	25
203	2,2',3,4,4',5,5',6	Octa-CB	25
205	2,3,3',4,4',5,5',6	Octa-CB	25
206	2,2',3,3',4,4',5,5',6	Nona-CB	25
207	2,2',3,3',4,4',5,6,6'	Nona-CB	25
208	2,2',3,3',4,5,5',6,6'	Nona-CB	25
209	2,2',3,3',4,4',5,5',6,6'	Deca-CB	25

Table 3. HRMS Coplanar PCBs Calibration Standard Concentrations

PCB congener	Cal 1 pg/µL	Cal 2 pg/µL	Cal 3 pg/µL	Cal 4 pg/µL	Cal 5 pg/µL
81 Tetra	5	20	100	250	500
77 Tetra	5	20	100	250	500
126 Penta	5	20	100	250	500
169 Hexa	5	20	100	250	500
Internal Quantitation Standards					
$^{13}C_{12}$ 77 Tetra	100	100	100	100	100
$^{13}C_{12}$ 81 Tetra	100	100	100	100	100
$^{13}C_{12}$ 126 Penta	100	100	100	100	100
$^{13}C_{12}$ 169 Hexa	100	100	100	100	100
Recovery Standard	100	100	100	100	100
$^{13}C_{12}$ 1,2,3,4-TCDD	100	100	100	100	100

Table 4. LRMS PCBs Calibration Standard Concentrations

PCB congener	CAL1 ng/mL	CAL2 ng/mL	CAL 3 ng/mL	CAL4 ng/mL	CAL 5 ng/mL	CAL 6 ng/mL
8	12.5	25	50	100	200	400
18	12.5	25	50	100	200	400
28	12.5	25	50	100	200	400
37	12.5	25	50	100	200	400
42	12.5	25	50	100	200	400
44	12.5	25	50	100	200	400
47	12.5	25	50	100	200	400
49	12.5	25	50	100	200	400
52	12.5	25	50	100	200	400
60	12.5	25	50	100	200	400
64	12.5	25	50	100	200	400
66	12.5	25	50	100	200	400
70	12.5	25	50	100	200	400
74	12.5	25	50	100	200	400
80	12.5	25	50	100	200	400
82	12.5	25	50	100	200	400
84	12.3	25	49	98	196	392
86	12.5	25	50	100	200	400
87	12.5	25	50	100	200	400
91	12.5	25	50	100	200	400
92	12.5	25	50	100	200	400
95	12.5	25	50	100	200	400
97	12.5	25	50	100	200	400
99	12.5	25	50	100	200	400
101	12.5	25	50	100	200	400
105	12.5	25	50	100	200	400
110	12.5	25	50	100	200	400
114	12.5	25	50	100	200	400
118	12.5	25	50	100	200	400
119	12.5	25	50	100	200	400
120	12.5	25	50	100	200	400
123	12.5	25	50	100	200	400
127	12.5	25	50	100	200	400
128	12.5	25	50	100	200	400
137	12.5	25	50	100	200	400
138	12.5	25	50	100	200	400
141	12.5	25	50	100	200	400
146	12.5	25	50	100	200	400
149	12.5	25	50	100	200	400
151	12.5	25	50	100	200	400
153	12.5	25	50	100	200	400
156	12.5	25	50	100	200	400
157	12.5	25	50	100	200	400
158	12.5	25	50	100	200	400

Table 4 (Continued)

PCB congener	CAL1 ng/mL	CAL2 ng/mL	CAL 3 ng/mL	CAL4 ng/mL	CAL 5 ng/mL	CAL 6 ng/mL
166	12.5	25	50	100	200	400
167	12.5	25	50	100	200	400
168	12.5	25	50	100	200	400
170	12.5	25	50	100	200	400
171	12.5	25	50	100	200	400
174	12.5	25	50	100	200	400
177	12.3	25	49	98	196	392
179	12.5	25	50	100	200	400
180	12.5	25	50	100	200	400
183	12.5	25	50	100	200	400
185	12.5	25	50	100	200	400
187	12.5	25	50	100	200	400
189	12.5	25	50	100	200	400
190	12.5	25	50	100	200	400
191	12.5	25	50	100	200	400
194	12.5	25	50	100	200	400
195	12.5	25	50	100	200	400
196	12.5	25	50	100	200	400
198	12.5	25	50	100	200	400
200	12.5	25	50	100	200	400
201	12.3	25	49	98	196	392
203	12.5	25	50	100	200	400
205	12.5	25	50	100	200	400
206	12.5	25	50	100	200	400
207	12.5	25	50	100	200	400
208	12.5	25	50	100	200	400
209	12.5	25	50	100	200	400
Surrogates						
$^{13}C_6$ mono PCB	7.8	15.6	31.3	62.5	125	250
$^{13}C_{12}$ tri PCB	7.8	15.6	31.3	62.5	125	250
$^{13}C_{12}$ tetra PCB	12.5	25.0	50	100	200	400
$^{13}C_{12}$ hexa PCB	12.5	25.0	50	100	200	400
$^{13}C_{12}$ octa PCB	29.4	58.8	118	235	470	940
$^{13}C_{12}$ deca PCB	33.1	66.3	133	265	530	1060
d_6 Tetra 77 IS	200	200	200	200	200	200

Table 5. Laboratory Surrogates Standard Spiking Solutions

Compound	Amount spiked (ng)
Laboratory Surrogates for HRGC/LRMS Analysis	
PCB surrogates	
$^{13}C_6$-Mono (3)a	200
$^{13}C_{12}$-Tri (28)	200
$^{13}C_{12}$-Tetra (52)	200
$^{13}C_{12}$-Hexa (153)	200
$^{13}C_{12}$-Octa (202)	470
$^{13}C_{12}$-Deca (209)	530

[a] Ballschmitter congener number shown in parentheses.

Table 6. $^{13}C_{12}$ Internal Quantitation Standard and Recovery Standard Spiking Solutions for HRGC/HRMS Analysis

Compound	Amount spiked (total pg)
Internal quantitation standard	
$^{13}C_{12}$ PCB 77	2000
$^{13}C_{12}$ PCB 81	2000
$^{13}C_{12}$ PCB 126	2000
$^{13}C_{12}$ PCB 169	2000
Recovery Standard	
$^{13}C_{12}$-1,2,3,4-TCDD	1,000
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1,000

Table 7. Operating Parameters for HRGC/LRMS Analysis

Mass spectrometer	Fisons MD 800
Electron energy	70 eV
Filament current	4.0 A
Source current	2104 µA
Trap current	103 µA
Start mass	35 *m/z*
End mass	550 *m/z*
Gas chromatograph	Hewlett Packard 5890
Column coating	DB-5
Film thickness	0.25 µm
Column dimensions	30-m x 0.25-mm i.d.
Solvent delay	5 min
Injector temp	280°
Injection size	2 µL
Initial temp	70°
Initial time	2
First temperature program	15°/min to 170°
Second temperature program	4°/min
Final temperature	300°

Table 8. HRGC/HRMS Operating Conditions for Coplanar PCB Analysis

Mass Spectrometer	VG70-S
Accelerating voltage:	8,000 V
Trap current:	500 µA
Electron energy:	35 eV
Photo-multiplier voltage:	340 V
Source temperature:	280°C
Resolution:	≥ 10,000 (10% valley definition)
Overall SIM cycle time:	1 sec
Gas Chromatograph	**Hewlett Packard 5890**
Column coating:	DB-5MS
Film thickness:	0.25 µm
Column dimensions:	60 m x 0.25 mm i.d.
He linear velocity:	~ 25 cm/sec
He head pressure:	25 psi
Injection type:	Splitless, 45 sec
Split flow:	30 mL/min
Purge flow:	3 mL/min
Injector temperature:	290°C
Interface temperature:	280°C
Injection size:	1 µL
Initial temperature:	200°C
Initial time:	2 min
Temperature program:	200° to 220°C at 5°C/min
Second hold time:	16 min
Second temperature ramp:	220° to 235°C at 5°C/min
Third hold time:	7 min
Third temperature ramp:	235° to 330°C at 5°C/min
Final hold time:	9 min

Table 9. Coplanar PCB Results for Aqueous Samples (pg/L)

Isomer	Field ID Extract ID MS File Matrix Batch (units)	Method Blank b1 41156 L18V12.RPT Method Blank 1 (pg/L)	Method Blank b2 41198 L28V11.RPT Method Blank 2 (pg/L)	MIX 1102 41140 L18V15.RPT Water 1 (pg/L)	WEIR 1102 41141 L18V16.RPT Water 1 (pg/L)	MIX 102998 41142 L18V17.RPT Water 1 (pg/L)	BG 102998 41143 L18V18.RPT Water 1 (pg/L)	WEIR 102998 41144 L18V19.RPT Water 1 (pg/L)
81-TCB		11.3	9.6	8.34	U (9.99 EMPC)	9.1	6.7	U (8.81 EMPC)
77-TCB		17.6	19	29.7	44.4	63.8	24	47.6
126-PeCB		U (2.64)	U (2.61)	2.84	U (2.6 EMPC)	U (5.4 EMPC)	U (1.96)	U (5.21 EMPC)
169-HxCB		U (4.13)	U (2.02)	2.05	U (2.44)	U (5.54)	U (2.42)	U (2.88)

U—*Undetected with the noise based detection limit given in parenthesis.*
EMPC—A peak was detected that did not meet the method criteria. The peak areas were used to calculate an Estimated Maximum Possible Concentration for the detection limit.

Table 9 (Continued)

Isomer	Field ID Extract ID MS File Matrix Batch (units)	EB 112598 41145 L18V110.RPT Water 1 (pg/L)	BG 1116 41146 L18V111.RPT Water 1 (pg/L)	MIX 1116 41147 L18V114.RPT Water 1 (pg/L)	WEIR 1116 41148 L18V115.RPT Water 1 (pg/L)	WEIR 110598 41149 L18V116.RPT Water 1 (pg/L)	WEIR 1112 41150 L18V117.RPT Water 1 (pg/L)	WEIR 1109 41151 L18V118.RPT Water 1 (pg/L)
81-TCB		7.3	8.19	7.5	8.88	U (11.1 EMPC)	7.71	7.5
77-TCB		13.3	12.9	28.6	34.3	63.1	42.6	58.3
126-PeCB		U (1.77)	U (2.5)	U (1.09)	U (2.4)	U (4.85 EMPC)	3.96	6.37
169-HxCB		U (2.5)	U (3.45)	3	U (2.48)	U (2.98)	U (2.07)	U (2.46)

U—Undetected with the noise based detection limit given in parenthesis.
EMPC—A peak was detected that did not meet the method criteria. The peak areas were used to calculate an Estimated Maximum Possible Concentration for the detection limit.

Table 9 (Continued)

Isomer	Field ID Extract ID MS File Matrix Batch (units)	INLET 1102 41182 L28V16.RPT Water 2 (pg/L)	INLET 102698 41183 L28V17.RPT Water 2 (pg/L)	BG 1112 41184 L28V18.RPT Water 2 (pg/L)	MIX 1109 41185 L28V111.RPT Water 2 (pg/L)	MIX 110598 41187 L28V112.RPT Water 2 (pg/L)	WEIR 1119 41188 L28V113.RPT Water 2 (pg/L)	WEIR 1124 41189 L28V114.RPT Water 2 (pg/L)
81-TCB		8.1	13.4	U (9.66 EMPC)	U (9.39 EMPC)	U (8.23 EMPC)	8.8	U (9.35 EMPC)
77-TCB		33.9	62.4	94.4	26.6	28.2	27.4	27.8
126-PeCB		U (2.46)	8.78	5.93	U (1.85)	U (2.36)	2.85	U (4.32)
169-HxCB		U (1.62)	U (3.89)	U (2.38 EMPC)	U (2.97)	U (1.61)	U (1.94)	U (4.41)

U—Undetected with the noise based detection limit given in parenthesis.
EMPC—A peak was detected that did not meet the method criteria. The peak areas were used to calculate an Estimated Maximum Possible Concentration for the detection limit.

Table 9 (Continued)

Isomer	Field ID Extract ID MS File Matrix Batch (units)	MIX 1112 41190 L28V115.RPT Water 2 (pg/L)	BG 1119 41191 L28V116.RPT Water 2 (pg/L)	MIX 1119 41192 L28V117.RPT Water 2 (pg/L)	INLET 101598 41193 L28V118.RPT Water 2 (pg/L)
81-TCB		U (6.97 EMPC)	7.41	0.96	9.99
77-TCB		37.9	18.2	19.9	57.6
126-PeCB		2.78	U (1.75)	U (2.78 EMPC)	4.43
169-HxCB		U (2.18)	U (3.01)	U (1.61)	U (2.81)

U—Undetected with the noise based detection limit given in parenthesis.
EMPC—A peak was detected that did not meet the method criteria. The peak areas were used to calculate an Estimated Maximum Possible Concentration for the detection limit.

Table 10. Coplanar PCB Results for Inlet Samples—pg/g Sediment Concentration and pg/L Slurry

Isomer	Field ID Extract ID MS File Matrix (units)	Method Blank b3 41241 A06V11.RPT Method Blank (pg/g)	INLET 1102 41233 A06V16.RPT sediment (pg/g)	INLET 1102 41233 A06V16.RPT sediment Slurry Component (pg/L)	INLET 1102 41182 L28V16.RPT Water (pg/L)	INLET 1102 41182 L28V16.RPT Water Slurry Component (pg/L)	INLET 1102 Total Slurry (pg/L)	INLET 102698 41234 A06V17.RPT sediment (pg/g)	INLET 102698 41234 A06V17.RPT sediment Slurry component (pg/L)	INLET 102698 41183 L28V17.RPT Water (pg/L)
81-TCB		1.14	8.0	152	8.1	7.95	160	9.75	616	13.4
77-TCB		5.15	437	8303	33.9	33.3	8336	585	36972	62.4
126-PeCB		U(.311)	19.5	371	U(2.46)	U(2.46)	371	21.1	1334	8.78
169-HxCB		U(.16)	4.34	82	U(1.82)	U(1.82)	82.5	4.55	288	U(3.89)

U - Undetected with the noise based detection limit given in parenthesis.
Slurry component pg/L = (pg/g dry sediment concentration) X (g dry sediment/ L Slurry)
Inlet Sample 1102= 1.90% Dry sediment, 98.1% Aqueous
Inlet Sample 102698 = 6.32% Dry sediment, 93.7% Aqueous
Inlet Sample 110598=6.56 % Dry sediment
Inlet Sample 101598=4.83 % Dry sediment, 95.2% Aqueous
Total Slurry pg/L = Sediment Component of Slurry pg/L + Aqueous Component of Slurry pg/L

Table 10 (Continued)

Isomer	Field ID Extract ID MS File Matrix (units)	INLET 102698 41183 L28V17.RPT Water Slurry component (pg/L)	INLET 102898 Total Slurry (pg/L)	INLET 110598 41235 A06V18.RPT sediment (pg/g)	INLET 110598 41235 A06V18.RPT sediment Slurry component (pg/L)	INLET 101598 41236 A06V19.RPT sediment (pg/g)	INLET 101598 41236 A06V19.RPT sediment Slurry component (pg/L)	INLET 101598 41193 L28V118.RPT Water (pg/L)	INLET 101598 41193 L28V118.RPT Water Slurry Component (pg/L)	INLET 101598 Total Slurry (pg/L)
81-TCB		12.6	629	8.64	567	8.02	387	9.99	9.51	397
77-TCB		58.5	37030	420	27552	346	16712	57.6	54.8	16767
126-PeCB		8.2	1342	19.7	1292	19	918	4.43	4.22	922
169-HxCB		U(3.89)	288	4.6	302	4.22	204	U(2.81)	U(2.81)	204

U - Undetected with the noise based detection limit given in parenthesis.
Slurry component pg/L = (pg/g dry sediment concentration) X (g dry sediment/ L Slurry)
Inlet Sample 1102= 1.90% Dry sediment, 98.1% Aqueous
Inlet Sample 102698 = 6.32% Dry sediment, 93.7% Aqueous
Inlet Sample 110598=6.56 % Dry sediment (Aqueous portion lost during sample preparation)
Inlet Sample 101598=4.63 % Dry sediment, 95.2% Aqueous
Total Slurry pg/L = Sediment Component of Slurry pg/L + Aqueous Component of Slurry pg/L

Table 11. Congener Specific PCB Results for Aqueous Samples

PCB Congener	Field ID Extract ID Matrix % Solids (units)	Method Blank b1 41156 Method Blank – (ng/L)	Method Blank b2 41198 Method Blank – (ng/L)	MIX 1102 41140 Water 0.146 (ng/L)	WEIR 1102 41141 Water 0.148 (ng/L)	MIX 102998 41142 Water 0.158 (ng/L)	BG 102998 41143 Water 0.218 (ng/L)	WEIR 102998 41144 Water 0.183 (ng/L)
8 Di		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
18 Tri		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
28 Tri		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
37 Tri		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
52 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
49 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
47 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
44 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
42 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
64 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
74 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
70 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
66 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
80 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
60 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
95 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
91 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
92 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
84/101 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
99 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
119 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
97/86 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
87 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
120 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
110 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
82 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
123 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
118 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
114 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)

Table 11 (Continued)

PCB Congener	Field ID Extract ID Matrix % Solids (units)	Method Blank b1 41156 Method Blank – (ng/L)	Method Blank b2 41198 Method Blank – (ng/L)	MIX 1102 41140 Water 0.146 (ng/L)	WEIR 1102 41141 Water 0.148 (ng/L)	MIX 102998 41142 Water 0.158 (ng/L)	BG 102998 41143 Water 0.218 (ng/L)	WEIR 102998 41144 Water 0.183 (ng/L)
105 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
151 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
149 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
146 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
153 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
168 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
141 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
137 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
138 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
158 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
166 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
128/167 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
156 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
157 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
179 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
187 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
183 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
185 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
174 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
177 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
171 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
180 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
191 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
170,190 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
189 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
200 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
198 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
201 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
196,203 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
195 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)

Table 11 (Continued)

PCB Congener	Field ID Extract ID Matrix % Solids (units)	Method Blank b1 41156 Method Blank – (ng/L)	Method Blank b2 41198 Method Blank – (ng/L)	MIX 1102 41140 Water 0.146 (ng/L)	WEIR 1102 41141 Water 0.148 (ng/L)	MIX 102998 41142 Water 0.158 (ng/L)	BG 102998 41143 Water 0.218 (ng/L)	WEIR 102998 41144 Water 0.183 (ng/L)
194 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
205 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
208 Nona		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
207 Nona		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
206 Nona		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
209 Deca		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Sum of Congeners		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)

U (#) = Compound Not detected; value in parentheses is the reporting limit based on the lowest calibration standard, adjusted for final volume and sample volume (liters)

Table 11 (Continued)

PCB Congener	Field ID Extract ID Matrix % Solids (units)	EB 112598 41145 Water 0.002 (ng/L)	BG 1116 41146 Water 0.261 (ng/L)	MIX 1116 41147 Water 0.171 (ng/L)	WEIR 1116 41148 Water 0.145 (ng/L)	WEIR 110598 41149 Water 0.145 (ng/L)	WEIR 1112 41150 Water 0.149 (ng/L)	WEIR 1109 41151 Water 0.143 (ng/L)	INLET 1102 41182 Water 1.9 (ng/L)
8 Di		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
18 Tri		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
28 Tri		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
37 Tri		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
52 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
49 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
47 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
44 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
42 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
64 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
74 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
70 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
66 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
80 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
60 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
95 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
91 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
92 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
84/101 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
99 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
119 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
97/86 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
87 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
120 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
110 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
82 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)

Table [illegible] (Continued)

PCB Congener	Field ID Extract ID Matrix % Solids (units)	EB 112598 41145 Water 0.002 (ng/L)	BG 1116 41146 Water 0.261 (ng/L)	MIX 1116 41147 Water 0.171 (ng/L)	WEIR 1116 41148 Water 0.145 (ng/L)	WEIR 110598 41149 Water 0.145 (ng/L)	WEIR 1112 41150 Water 0.149 (ng/L)	WEIR 1109 41151 Water 0.143 (ng/L)	INLET 1102 41182 Water 1.9 (ng/L)
123 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
118 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
114 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
105 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
151 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
149 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
146 hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
153 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
168 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
141 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
137 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
138 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
158 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
166 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
128/167 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
156 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
157 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
179 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
187 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
183 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
185 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
174 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
177 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
171 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
180 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
191 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
170,190 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)

Table 11 (Continued)

PCB Congener	Field ID Extract ID Matrix % Solids (units)	EB 112598 41145 Water 0.002 (ng/L)	BG 1116 41146 Water 0.261 (ng/L)	MIX 1116 41147 Water 0.171 (ng/L)	WEIR 1116 41148 Water 0.145 (ng/L)	WEIR 110598 41149 Water 0.145 (ng/L)	WEIR 1112 41150 Water 0.149 (ng/L)	WEIR 1109 41151 Water 0.143 (ng/L)	INLET 1102 41182 Water 1.9 (ng/L)
189 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
200 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
198 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
201 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
196,203 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
195 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
194 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
205 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
208 Nona		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
207 Nona		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
206 Nona		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
209 Deca		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Sum of Congeners		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)

U (#) = Compound Not detected; value in parentheses is the reporting limit based on the lowest calibration standard, adjusted for final volume and sample volume (liters)

Table II (Continued)

PCB Congener	Field ID Extract ID Matrix % Solids (units)	INLET 102698 41183 Water 6.322 (ng/L)	BG 1112 41184 Water 0.291 (ng/L)	MIX 1109 41185 Water 0.187 (ng/L)	MIX 110598 41187 Water 0.133 (ng/L)	WEIR 1119 41188 Water 0.149 (ng/L)	WEIR 1124 41189 Water 0.162 (ng/L)	MIX 1112 41190 Water 0.177 (ng/L)
8 Di		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
18 Tri		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
28 Tri		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
37 Tri		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
52 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
49 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
47 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
44 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
42 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
64 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
74 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
70 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
66 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
80 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
60 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
95 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
91 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
92 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
84/101 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
99 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
119 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
97/86 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
87 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
120 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
110 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
82 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
123 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
118 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
114 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)

Table 11 (Continued)

PCB Congener	Field ID Extract ID Matrix % Solids (units)	INLET 102698 41183 Water 6.322 (ng/L)	BG 1112 41184 Water 0.291 (ng/L)	MIX 1109 41185 Water 0.187 (ng/L)	MIX 110598 41187 Water 0.133 (ng/L)	WEIR 1119 41188 Water 0.149 (ng/L)	WEIR 1124 41189 Water 0.162 (ng/L)	MIX 1112 41190 Water 0.177 (ng/L)
105 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
151 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
149 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
146 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
153 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
168 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
141 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
137 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
138 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
158 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
166 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
128/167 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
156 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
157 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
179 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
187 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
183 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
185 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
174 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
177 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
171 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
180 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
191 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
170,190 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
189 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
200 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
198 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
201 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
196,203 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
195 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)

Table 11 (Continued)

PCB Congener	Field ID Extract ID Matrix % Solids (units)	INLET 102698 41163 Water 6.322 (ng/L)	BG 1112 41184 Water 0.291 (ng/L)	MIX 1109 41185 Water 0.187 (ng/L)	MIX 110598 41187 Water 0.133 (ng/L)	WEIR 1119 41188 Water 0.149 (ng/L)	WEIR 1124 41189 Water 0.162 (ng/L)	MIX 1112 41190 Water 0.177 (ng/L)
194 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
205 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
208 Nona		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
207 Nona		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
206 Nona		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
209 Deca		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Sum of Congeners		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)

U (#) = Compound Not detected; value in parentheses is the reporting limit based on the lowest calibration standard, adjusted for final volume and sample volume (Liters)

Table 11 (Continued)

PCB Congener	Field ID Extract ID Matrix % Solids (units)	BG 1119 41191 Water 0.32 (ng/L)	MIX 1119 41192 Water 0.201 (ng/L)	INLET 101598 41193 Water 4.83 (ng/L)
8 Di		U (25)	U (25)	U (25)
18 Tri		U (25)	U (25)	U (25)
28 Tri		U (25)	U (25)	U (25)
37 Tri		U (25)	U (25)	U (25)
52 Tetra		U (25)	U (25)	U (25)
49 Tetra		U (25)	U (25)	U (25)
47 Tetra		U (25)	U (25)	U (25)
44 Tetra		U (25)	U (25)	U (25)
42 Tetra		U (25)	U (25)	U (25)
64 Tetra		U (25)	U (25)	U (25)
74 Tetra		U (25)	U (25)	U (25)
70 Tetra		U (25)	U (25)	U (25)
66 Tetra		U (25)	U (25)	U (25)
80 Tetra		U (25)	U (25)	U (25)
60 Tetra		U (25)	U (25)	U (25)
95 Penta		U (25)	U (25)	U (25)
91 Penta		U (25)	U (25)	U (25)
92 Penta		U (25)	U (25)	U (25)
84/101 Penta		U (25)	U (25)	U (25)
99 Penta		U (25)	U (25)	U (25)
119 Penta		U (25)	U (25)	U (25)
97/86 Penta		U (25)	U (25)	U (25)
87 Penta		U (25)	U (25)	U (25)
120 Penta		U (25)	U (25)	U (25)
110 Penta		U (25)	U (25)	U (25)
82 Penta		U (25)	U (25)	U (25)
123 Penta		U (25)	U (25)	U (25)
118 Penta		U (25)	U (25)	U (25)

Table 11 (Continued)

PCB Congener	Field ID Extract ID Matrix % Solids (units)	BG 1119 41191 Water 0.32 (ng/L)	MIX 1119 41192 Water 0.201 (ng/L)	INLET 101598 41193 Water 4.83 (ng/L)
114 Penta		U (25)	U (25)	U (25)
105 Penta		U (25)	U (25)	U (25)
151 Hexa		U (25)	U (25)	U (25)
149 Hexa		U (25)	U (25)	U (25)
146 Hexa		U (25)	U (25)	U (25)
153 Hexa		U (25)	U (25)	U (25)
168 Hexa		U (25)	U (25)	U (25)
141 Hexa		U (25)	U (25)	U (25)
137 Hexa		U (25)	U (25)	U (25)
136 Hexa		U (25)	U (25)	U (25)
158 Hexa		U (25)	U (25)	U (25)
166 Hexa		U (25)	U (25)	U (25)
128/167 Hexa		U (25)	U (25)	U (25)
156 Hexa		U (25)	U (25)	U (25)
157 Hexa		U (25)	U (25)	U (25)
179 Hepta		U (25)	U (25)	U (25)
187 Hepta		U (25)	U (25)	U (25)
183 Hepta		U (25)	U (25)	U (25)
185 Hepta		U (25)	U (25)	U (25)
174 Hepta		U (25)	U (25)	U (25)
177 Hepta		U (25)	U (25)	U (25)
171 Hepta		U (25)	U (25)	U (25)
180 Hepta		U (25)	U (25)	U (25)
191 Hepta		U (25)	U (25)	U (25)
170,190 Hepta		U (25)	U (25)	U (25)
189 Hepta		U (25)	U (25)	U (25)
200 Octa		U (25)	U (25)	U (25)
198 Octa		U (25)	U (25)	U (25)
201 Octa		U (25)	U (25)	U (25)

Table 11 (Continued)

PCB Congener	Field ID Extract ID Matrix % Solids (units)	BG 1119 41191 Water 0.32 (ng/L)	MIX 1119 41192 Water 0.201 (ng/L)	INLET 101598 41193 Water 4.83 (ng/L)
196,203 Octa		U (25)	U (25)	U (25)
195 Octa		U (25)	U (25)	U (25)
194 Octa		U (25)	U (25)	U (25)
205 Octa		U (25)	U (25)	U (25)
208 Nona		U (25)	U (25)	U (25)
207 Nona		U (25)	U (25)	U (25)
206 Nona		U (25)	U (25)	U (25)
209 Deca		U (25)	U (25)	U (25)
Sum of Congeners		U (25)	U (25)	U (25)

U (#) = Compound Not detected; value in parentheses is the reporting limit based on the lowest calibration standard, adjusted for final volume and sample volume (liters)

Table 12. Congener Specific PCB Results for Inlet Samples—ng/g Sediment Concentration and ng/L Slurry

PCB Congener	Field ID Extract ID Matrix Slurry % Solids g solids/liter (units)	Method Blank b3 41241 Method Blank (ng/g)	INLET 1102 41233 sediment 1.9 19 (ng/g)	INLET 1102 41233 sediment Slurry Component (ng/L)	INLET 102698 41234 sediment 6.32 63.2 (ng/g)	INLET 102698 41234 sediment Slurry component (ng/L)	INLET 110598 41235 sediment 6.56 65.6 (ng/g)	INLET 110598 41235 sediment Slurry component (ng/L)	INLET 101598 41236 sediment 4.83 48.3 (ng/g)	INLET 101598 41236 sediment Slurry component (ng/L)
8 Di		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
18 Tri		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
28 Tri		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
37 Tri		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
52 Tetra		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
49 Tetra		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
47 Tetra		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
44 Tetra		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
42 Tetra		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
64 Tetra		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
74 Tetra		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
70 Tetra		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
66 Tetra		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
80 Tetra		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
60 Tetra		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
95 Penta		U(2.5)	4.38	83.22	3.84	242.688	9.16	600.696	5.36	258.888
91 Penta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
92 Penta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
84/101 Penta		U(2.5)	8.17	155.23	5.82	367.824	5.86	384.416	7.41	357.903
99 Penta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
119 Penta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
97/86 Penta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
87 Penta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
120 Penta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
110 Penta		U(2.5)	U(8.7 EMPC)	U(165 EMPC)	U(6.94 EMPC)	U(439 EMPC)	U(6.32 EMPC)	U(415 EMPC)	U(5.64 EMPC)	U(264 EMPC)
82 Penta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
123 Penta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
118 Penta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
114 Penta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
105 Penta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
151 Hexa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
149 Hexa		U(2.5)	4.52	85.88	7.79	492.328	8.39	550.384	5.13	247.779
146 hexa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
153 Hexa		U(2.5)	8.36	158.84	5.24	331.168	10.5	688.6	4.77	230.391
168 Hexa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
141 Hexa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)

Table 12 (Continued)

PCB Congener	Field ID Extract ID Matrix Slurry % Solids g solids/liter (units)	Method Blank b3 41241 Method Blank (ng/g)	INLET 1102 41233 sediment 1.9 19 (ng/g)	INLET 1102 41233 sediment Slurry Component (ng/L)	INLET 102698 41234 sediment 6.32 63.2 (ng/g)	INLET 102698 41234 sediment Slurry component (ng/L)	INLET 110598 41235 sediment 6.56 65.6 (ng/g)	INLET 110598 41235 sediment Slurry component (ng/L)	INLET 101598 41236 sediment 4.83 48.3 (ng/g)	INLET 101596 41236 sediment Slurry component (ng/L)
137 Hexa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
138 Hexa		U(2.5)	U(2.5)	U(48)	U(7.86 EMPC)	U(487 EMPC)	U(2.5)	U(164)	U(2.5)	U(121)
158 Hexa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
166 Hexa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
128/167 Hexa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
156 Hexa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
157 Hexa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
179 Hepta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
187 Hepta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
183 Hepta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
185 Hepta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
174 Hepta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
177 Hepta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
171 Hepta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
180 Hepta		U(2.5)	4.04	76.76	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
191 Hepta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
170,190 Hepta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
189 Hepta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
200 Octa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
198 Octa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
201 Octa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
196,203 Octa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
195 Octa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
194 Octa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
205 Octa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
208 Nona		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
207 Nona		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
206 Nona		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
209 Deca		U(2.5)	5.6	106.4	5.34	337.488	6.35	416.56	5.62	271.446
Sum of Congeners		U(2.5)	35.07	666.33	28.03	1771.496	40.26	2641.056	28.29	1366.407

U (#) = Compound Not detected; value in parentheses is the reporting limit based on the lowest calibration standard, adjusted for final volume and sample volume (Liters)
EMPC—A peak was detected that did not meet the method criteria. The peak areas were used to calculate an Estimated Maximum Possible Concentration for the detection limit.
ng/L Slurry =(ng/g dried sediment) X (g sediment dry weight/liter slurry)

Table 13. PCB Homolog Results for Aqueous Samples

Homolog	Field ID Extract ID Matrix (units)	Method Blank b1 41156 Method Blank (ng/L)	Method Blank b2 41198 Method Blank (ng/L)	MIX 1102 41140 Water (ng/L)	WEIR 1102 41141 Water (ng/L)	MIX 102998 41142 Water (ng/L)	BG 102998 41143 Water (ng/L)	WEIR 102998 41144 Water (ng/L)
Mono		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Di		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Tri		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Nona		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Deca		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Sum of Homologs		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)

U (#) = Compound Not detected; value in parentheses is the reporting limit based on the lowest calibration standard, adjusted for final volume and sample volume (liters)

Table 13 (Continued)

Homolog	Field ID Extract ID Matrix (units)	EB 112578 41145 Water (ng/L)	BG 1116 41146 Water (ng/L)	MIX 1116 41147 Water (ng/L)	WEIR 1116 41148 Water (ng/L)	WEIR 110598 41149 Water (ng/L)	WEIR 1112 41150 Water (ng/L)	WEIR 1109 41151 Water (ng/L)
Mono		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Di		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Tri		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Nona		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Deca		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Sum of Homologs		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)

U (#) = Compound Not detected; value in parentheses is the reporting limit based on the lowest calibration standard, adjusted for final volume and sample volume (liters)

Table 13 (Continued)

Homolog	Field ID Extract ID Matrix (units)	INLET 1102 41182 Water (ng/L)	INLET 102698 41183 Water (ng/L)	BG 1112 41184 Water (ng/L)	MIX 1109 41185 Water (ng/L)	MIX 110598 41187 Water (ng/L)	WEIR 1119 41188 Water (ng/L)	WEIR 1124 41189 Water (ng/L)
Mono		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Di		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Tri		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Nona		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Deca		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Sum of Homologs		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)

U (#) = Compound Not detected; value in parentheses is the reporting limit based on the lowest calibration standard, adjusted for final volume and sample volume (liters)

Table 13 (Continued)

Homolog	Field ID Extract ID Matrix (units)	MIX 1112 41190 Water (ng/L)	BG 1119 41191 Water (ng/L)	MIX 1119 41192 Water (ng/L)	INLET 101598 41193 Water (ng/L)
Mono		U (25)	U (25)	U (25)	U (25)
DI		U (25)	U (25)	U (25)	U (25)
Tri		U (25)	U (25)	U (25)	U (25)
Tetra		U (25)	U (25)	U (25)	U (25)
Penta		U (25)	U (25)	U (25)	U (25)
Hexa		U (25)	U (25)	U (25)	U (25)
Hepta		U (25)	U (25)	U (25)	U (25)
Octa		U (25)	U (25)	U (25)	U (25)
Nona		U (25)	U (25)	U (25)	U (25)
Deca		U (25)	U (25)	U (25)	U (25)
Sum of Homologs		U (25)	U (25)	U (25)	U (25)

U (#) = Compound Not detected; value in parentheses is the reporting limit based on the lowest calibration standard, adjusted for final volume and sample volume (liters)

Table 14. PCB Homolog Results for Inlet Samples—ng/g Sediment Concentration and ng/L Slurry

Homolog	Field ID Extract ID Matrix Slurry % Solids g solids/Liter (units)	Method Blank b3 41241 Method Blank (ng/g)	INLET 1102 41233 sediment 1.9 19 (ng/g)	INLET 1102 41233 sediment Slurry Component (ng/L)	INLET 102698 41234 sediment 6.32 63.2 (ng/g)	INLET 102698 41234 sediment Slurry component (ng/L)	INLET 110598 41235 sediment 6.56 65.6 (ng/g)	INLET 110598 41235 sediment Slurry component (ng/L)	INLET 101598 41236 sediment 4.83 48.3 (ng/g)	INLET 101598 41236 sediment Slurry component (ng/L)
Mono		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
Di		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
Tri		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
Tetra		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
Penta		U(2.5)	12.55	238	9.66	611	15.02	985	12.77	617
Hexa		U(2.5)	12.88	245	13.03	823	18.89	1239	9.9	478
Hepta		U(2.5)	4.04	76.76	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
Octa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
Nona		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
Deca		U(2.5)	5.6	106.4	5.34	337	6.35	417	5.62	271
Sum of Homologs		U(2.5)	35.07	666	28.03	1771	40.26	2641	28.29	1366

U (#) = Compound Not detected; value in parentheses is the reporting limit based on the lowest calibration standard, final volume, and sample amount extracted (g or L)
EMPC—A peak was detected that did not meet the method criteria. The peak areas were used to calculate an Estimated Maximum Possible Concentration for the detection limit.
ng/L Slurry = (ng/g dried sediment) X (g sediment dry weight/Liter slurry)

Table 15. Coplanar PCBs Laboratory Control Spike Results

Isomer	Aqueous Spike Level pg/L	Sediment Spike Level pg/g	Sample ID Extract ID MS File Units	LCS b1 41155 L18V13.RPT % Recovery	LCS b1 41154 L28V14.RPT % Recovery	LCS b2 41197 L28V12.RPT % Recovery	LCS b2 41196 L28V13.RPT % Recovery	Mean % Recovery	RSD n=4	LCS1 b3 41239 A06V12.RPT % Recovery	LCS2 b3 41240 A06V13.RPT % Recovery	Mean % Recovery	RPD n=2
81-TCB	4000	400		102	100	97.8	97.3	99.3	2.2	91.5	91.5	91.5	0.00
77-TCB	4000	400		102	98.8	97.8	96.8	98.8	2.3	94	93	93.5	1.07
126-PeCB	4000	400		105	102	101	101	102	1.9	102	102	102	0.24
169-HxCB	4000	400		109	106	104	101	105	3.0	107	106	106	0.94

LCS b1 and b2 samples are laboratory control spike water samples spiked at 4000 pg/L
LCS b3 samples are sediment samples spiked at 400 pg/g
RSD = relative standard deviation
RPD = relative percent difference

Table 16. Coplanar PCB Labeled Analog Recovery for Water Matrix (%)

Labeled Analog	Field ID Extract ID MS File Matrix	Method Blank b1 41156 L18V12.RPT Method Blank	Method Blank b2 41198 L28V11.RPT Method Blank	MIX 1102 41140 L18V15.RPT Water	WEIR 1102 41141 L18V16.RPT Water	MIX 102998 41142 L18V17.RPT Water	BG 102998 41143 L18V18.RPT Water	WEIR 102998 41144 L18V19.RPT Water
13C 81-TCB		78.4	98.1	84.3	80.1	79.2	82.9	82.3
13C 77-TCB		82.2	95.6	86.1	86.5	90.3	87.7	89.2
13C 126-PeCB		91.5	102	101	88	76.8	98.1	101
13C 169-HxCB		62.8	113	93.1	66.3	44.4	83.8	80.5

J—The labeled analog recovery is outside the MRI criteria of 25-150%.

Table 16 (Continued)

Labeled Analog	Field ID Extract ID MS File Matrix	EB 112598 41145 L18V110.RPT Water	BG 1116 41146 L18V111.RPT Water	MIX 1116 41147 L18V114.RPT Water	WEIR 1116 41148 L18V115.RPT Water	WEIR 110598 41149 L18V116.RPT Water	WEIR 1112 41150 L18V117.RPT Water	WEIR 1109 41151 L18V118.RPT Water
13C 81-TCB		82.8	64.5	84.8	88.8	67.4	82.1	77.9
13C 77-TCB		86.5	78.6	89.5	94.9	70.9	83	82.2
13C 126-PeCB		100	64.9	94.4	89.3	69	97.8	91.9
13C 169-HxCB		84	49.3	69.3	69.7	51.9	84.8	68.3

J—The labeled analog recovery is outside the MRI criteria of 25-150%.

Table 16 (Continued)

Labeled Analog	Field ID Extract ID MS File Matrix	INLET 1102 41182 L28V16.RPT Water	INLET 102698 41183 L28V17.RPT Water	BG 1112 41184 L28V18.RPT Water	MIX 1109 41185 L28V111.RPT Water	MIX 110598 41187 L28V112.RPT Water	WEIR 1119 41188 L28V113.RPT Water	WEIR 1124 41189 L28V114.RPT Water
13C 81-TCB		105	96.4	106	96.2	93.1	112	53.4
13C 77-TCB		108	99.1	106	94.7	93.9	114	55.7
13C 126-PeCB		115	106	112	102	106	121	56.9
13C 169-HxCB		131	121	137	117	131	136	61.8

J—The labeled analog recovery is outside the MRI criteria of 25-150%.

Table 16 (Continued)

Labeled Analog	Field ID Extract ID MS File Matrix	MIX 1112 41190 L28V115.RPT Water	BG 1119 41191 L28V116.RPT Water	MIX 1119 41192 L28V117.RPT Water	INLET 101598 41193 L28V118.RPT Water	LCS b1 41155 L18V13.RPT LCS	LCS b1 41154 L28V14.RPT LCS	LCS b2 41197 L28V12.RPT LCS	LCS b2 41196 L28V13.RPT LCS
13C 81-TCB		109	94.4	110	105	59.6	78.3	87.4	106
13C 77-TCB		112	99.6	111	112	85.4	93.1	86.6	108
13C 126-PeCB		114	102	121	113	46.3	63.8	96.4	113
13C 169-HxCB		120	103	137	122	24.8(J)	39.2	121	126

J—The labeled analog recovery is outside the MRI criteria of 25-150%.

Table 16 (Continued)

Labeled Analog	Field ID Extract ID MS File Matrix	Average	Standard Deviation
13C 81-TCB		87.8	15.3
13C 77-TCB		92.4	13.2
13C 126-PeCB		95.0	19.2
13C 169-HxCB		91.3	33.8

J—The labeled analog recovery is outside the MRI criteria of 25-150%.

Table 17. Coplanar PCB Labeled Analog Recoveries for Sediment Matrix (%)

Labeled Analog	Field ID Extract ID MS File Matrix	Method Blank b3 41241 A06V11.RPT Method Blank	INLET 1102 41233 A06V16.RPT sediment	INLET 102698 41234 A06V17.RPT sediment	INLET 110598 41235 A06V18.RPT sediment	INLET 101598 41236 A06V19.RPT sediment	LCS2 b3 41240 A06V13.RPT LCS	Average	Standard Deviation
13C 81-TCB		102	107	102	102	38.1	111	93.7	27.5
13C 77-TCB		97.6	108	102	98.3	39.4	107	91.7	25.9
13C 126-PeCB		103	107	109	104	39	105	94.5	27.3
13C 169-HxCB		118	125	126	121	46.2	126	110.4	31.6

J—The labeled analog recovery is outside the MRI criteria of 25-150%.

Table 18. Congener Specific PCBs Laboratory Control Spike Results

PCB Congener	Aqueous LCS Spike Level Batch 1,2 ng/L	Sediment LCS Spike Level Batch 3 ng/g	Lab ID (a) Extract ID MS File Matrix Units	LCS1 B1 41152 L18F12 Water % Recovery	LCS2 B1 41153 L18 F 13 Water % Recovery	LCS1 B2 41194 A04F03 Water % Recovery	LCS2 B2 41195 A04F04 Water % Recovery	Water Mean % Recovery	RSD n=4
DiPCB(8)	100	10		77.1	76.2	69.8	62.2	71.3	9.7
TriPCB(18)	100	10		78.5	79.6	72.2	72.2	75.6	5.3
TriPCB(28)	100	10		89.5	91.5	76.9	72.9	82.7	11.1
TriPCB(37)	100	10		86.7	83.2	75.6	71.4	79.2	8.8
TetraPCB(52)	100	10		80.1	79.7	67.5	64.8	73.0	11.0
TetraPCB(49)	100	10		78.3	74.3	62.7	66.4	70.4	10.1
TetraPCB(47)	100	10		77.5	80.6	66.6	66.1	72.7	10.2
TetraPCB(44)	100	10		80.2	77.6	65.2	67.4	72.6	10.2
TetraPCB(42)	100	10		75.6	77.0	67.7	63.8	71.0	8.9
TetraPCB(64)	100	10		79.1	83.7	68.8	68.0	74.9	10.3
TetraPCB(74)	100	10		80.1	82.4	73.2	72.2	77.0	6.6
TetrePCB(70)	100	10		87.6	84.4	77.4	69.3	79.7	10.2
TetrePCB(66)	100	10		80.5	85.0	63.2	67.2	74.0	14.1
TetraPCB(80)	100	10		84.2	84.2	74.9	73.8	79.3	7.2
TetrePCB(60)	100	10		80.7	81.2	68.2	73.6	75.9	8.2
PentaPCB(95)	100	10		81.7	86.1	66.9	68.5	75.8	12.6
PentaPCB(91)	100	10		82.6	82.0	69.6	68.5	75.7	10.2
PentePCB(92)	100	10		81.2	81.8	72.4	72.4	76.9	6.6
PentaPCB(84/101)	200	20		85.3	82.0	69.5	70.3	76.8	10.5
PentaPCB(99)	100	10		84.2	86.6	68.1	71.2	77.5	11.9
PentaPCB(119)	100	10		79.9	83.6	69.9	71.1	76.1	8.7
PentaPCB(97)	100	10		80.7	84.8	71.1	78.7	78.8	7.3
PentaPCB(86)	100	10		89.5	81.4	68.8	66.6	76.6	14.1
PentaPCB(87)	100	10		81.2	82.5	65.1	74.5	75.8	10.5
PentaPCB(120)	100	10		84.0	84.5	71.1	69.4	77.3	10.5
PentaPCB(110)	100	10		81.4	84.4	70.9	67.1	75.9	10.9
PentaPCB(82)	100	10		82.3	82.3	69.4	74.4	77.1	8.2
PentaPCB(123)	100	10		87.6	82.6	75.8	68.9	78.7	10.3
PentaPCB(118)	100	10		85.7	84.9	77.4	76.3	81.1	6.1

Table 18 (Continued)

PCB Congener	Aqueous LCS Spike Level Batch 1,2 ng/L	Sediment LCS Spike Level Batch 3 ng/g	Lab ID (a) Extract ID MS File Matrix Units	LCS1 B1 41152 L18F12 Water % Recovery	LCS2 B1 41153 L18 F 13 Water % Recovery	LCS1 B2 41194 A04F03 Water % Recovery	LCS2 B2 41195 A04F04 Water % Recovery	Water Mean % Recovery	RSD n=4
PentaPCB(114)	100	10		75.6	80.3	71.9	66.4	73.6	8.0
PentaPCB(105/127)	200	20		84.3	82.6	73.4	71.9	78.0	8.1
HexaPCB(151)	100	10		83.8	84.3	65.7	68.0	75.5	13.3
HexaPCB(149)	100	10		84.8	83.7	66.0	69.7	76.0	12.6
HexaPCB(146)	100	10		82.7	81.7	69.9	66.6	75.2	10.9
HexaPCB(153)	100	10		83.7	85.3	70.4	70.3	77.4	10.6
HexaPCB(168)	100	10		84.9	84.0	70.9	69.6	77.3	10.6
HexaPCB(141)	100	10		77.5	82.4	66.9	68.8	73.9	9.9
HexaPCB(137)	100	10		79.9	85.0	72.9	69.2	76.7	9.2
HexaPCB(138)	100	10		89.8	97.5	74.6	76.2	84.5	13.0
HexaPCB(158)	100	10		89.3	87.5	66.8	67.6	77.8	15.7
HexaPCB(166)	100	10		86.8	87.6	71.3	70.3	79.0	11.9
HexaPCB(128/167)	200	20		87.1	88.8	71.9	71.9	79.9	11.6
HexaPCB(156)	100	10		86.5	86.6	70.4	69.6	78.2	12.2
HexaPCB(157)	100	10		80.6	85.2	69.6	69.8	76.3	10.2
HeptaPCB(179)	100	10		79.8	80.8	68.4	68.3	74.3	9.3
HeptaPCB(187)	100	10		82.9	82.5	71.4	74.2	77.7	7.5
HeptaPCB(183)	100	10		89.7	88.9	73.5	63.7	78.9	16.0
HeptaPCB(185)	100	10		81.5	87.7	70.4	65.3	76.2	13.4
HeptaPCB(174)	100	10		83.7	78.1	74.6	66.5	75.7	9.5
HeptaPCB(177)	100	10		87.5	81.0	58.1	69.4	74.0	17.5
HeptaPCB(171)	100	10		85.6	79.8	63.0	68.7	74.3	13.8
HeptaPCB(180)	100	10		86.2	81.7	64.0	74.1	76.5	12.7
HeptaPCB(191)	100	10		84.2	78.3	64.0	66.0	73.1	13.3
HeptaPCB(170/190)	200	20		82.7	82.0	80.4	71.2	79.1	6.8
HeptaPCB(189)	100	10		82.9	81.8	66.7	66.1	74.4	12.4
OctaPCB(200)	100	10		80.7	81.7	61.4	65.6	72.3	14.3
OctaPCB(198)	100	10		82.0	86.6	63.2	60.9	73.2	17.8
OctaPCB(201)	100	10		75.7	80.4	65.0	59.2	70.1	13.8
OctaPCB(196/203)	200	20		86.3	81.0	66.8	64.5	74.6	14.3

Table 18 (Continued)

PCB Congener	Aqueous LCS Spike Level Batch 1,2 ng/L	Sediment LCS Spike Level Batch 3 ng/g	Lab ID (a) Extract ID MS File Matrix Units	LCS1 B1 41152 L18F12 Water % Recovery	LCS2 B1 41153 L18 F 13 Water % Recovery	LCS1 B2 41194 A04F03 Water % Recovery	LCS2 B2 41195 A04F04 Water % Recovery	Water Mean % Recovery	RSD n=4
OctaPCB(195)	100	10		86.8	87.4	75.4	64.8	78.6	13.8
OctaPCB(194)	100	10		85.9	77.9	66.5	59.9	72.6	16.0
OctaPCB(205)	100	10		86.6	85.4	62.5	64.3	74.7	17.5
NonaPCB(208)	100	10		87.4	87.8	68.5	66.9	77.6	14.8
NonaPCB(207)	100	10		84.8	83.6	68.5	68.0	76.3	12.1
NonaPCB(206)	100	10		88.2	88.9	74.2	76.5	81.9	9.4
DecaPCB(209)	100	10		86.1	88.8	65.8	66.1	76.2	15.5

[a] Lab ID Code- LCS1 designates laboratory control spike 1; LCS2 is spike 2; and B designates Batch number

Table 18 (Continued)

PCB Congener	LCS1 B3 41237 A05F7 Sediment % Recovery	LCS2 B3 41238 A05F8 Sediment % Recovery	Sediment Mean % Recovery	RPD n=2
DiPCB(8)	52.2	58.1	55.2	10.6
TriPCB(18)	56.5	62.9	59.7	10.7
TriPCB(28)	70.8	76.0	73.4	7.1
TriPCB(37)	76.1	79.8	78.0	4.7
TetraPCB(52)	64.4	71.6	68.0	10.5
TetraPCB(49)	58.6	69.1	63.8	16.5
TetraPCB(47)	63.8	69.1	66.4	8.0
TetraPCB(44)	62.6	66.7	64.7	6.2
TetraPCB(42)	64.7	68.9	66.8	6.4
TetraPCB(64)	70.2	71.2	70.7	1.4
TetraPCB(74)	74.9	77.3	76.1	3.1
TetraPCB(70)	77.2	84.9	81.1	9.5
TetraPCB(66)	67.5	69.2	68.3	2.5
TetraPCB(80)	77.7	80.3	79.0	3.3
TetraPCB(60)	75.3	79.4	77.3	5.4
PentaPCB(95)	67.4	67.9	67.6	0.6
PentaPCB(91)	73.6	72.1	72.9	2.0
PentaPCB(92)	77.0	77.0	77.0	0.0
PentaPCB(84/101)	72.3	74.4	73.4	2.9
PentaPCB(99)	77.4	74.0	75.7	4.5
PentaPCB(119)	75.0	74.0	74.5	1.4
PentaPCB(97)	72.5	76.5	74.5	5.4
PentaPCB(86)	78.5	108.5	93.5	32.1
PentaPCB(87)	75.1	69.4	72.2	7.9
PentaPCB(120)	74.9	45.1	60.0	49.6
PentaPCB(110)	73.0	72.8	72.9	0.3
PentaPCB(82)	76.5	78.1	77.3	2.1
PentaPCB(123)	80.2	78.1	79.1	2.6
PentaPCB(118)	82.0	87.9	85.0	6.9

Table 18 (Continued)

PCB Congener	LCS1 B3 41237 A05F7 Sediment % Recovery	LCS2 B3 41238 A05F8 Sediment % Recovery	Sediment Mean % Recovery	RPD n=2
PentaPCB(114)	75.9	72.2	74.0	5.0
PentaPCB(105/127)	79.8	81.6	80.7	2.2
HexaPCB(151)	70.9	72.2	71.6	1.7
HexaPCB(149)	75.7	70.6	73.2	7.0
HexaPCB(146)	71.5	70.4	71.0	1.6
HexaPCB(153)	78.1	75.8	76.9	3.0
HexaPCB(168)	77.6	71.8	74.7	7.7
HexaPCB(141)	73.3	71.5	72.4	2.5
HexaPCB(137)	78.6	73.9	76.2	6.1
HexaPCB(138)	80.6	77.1	78.8	4.4
HexaPCB(158)	72.6	72.7	72.6	0.1
HexaPCB(166)	74.9	75.4	75.1	0.6
HexaPCB(128/167)	75.5	79.2	77.4	4.8
HexaPCB(156)	76.3	77.1	76.7	1.0
HexaPCB(157)	78.6	73.3	74.9	4.4
HeptaPCB(179)	75.1	78.1	76.6	3.9
HeptaPCB(187)	80.5	73.8	77.1	8.7
HeptaPCB(183)	72.9	81.2	77.0	10.8
HeptaPCB(185)	78.1	77.2	77.7	1.1
HeptaPCB(174)	77.9	78.6	78.2	0.9
HeptaPCB(177)	68.0	68.1	66.1	0.1
HeptaPCB(171)	78.8	79.0	77.9	2.8
HeptaPCB(180)	78.3	67.5	72.9	14.9
HeptaPCB(191)	75.6	72.0	73.8	4.9
HeptaPCB(170/190)	82.6	70.5	76.5	15.8
HeptaPCB(189)	69.6	71.4	70.5	2.5
OctaPCB(200)	69.8	68.4	69.1	2.1
OctaPCB(198)	67.7	67.7	67.7	0.0
OctaPCB(201)	68.8	70.2	69.5	2.0
OctaPCB(196/203)	69.2	73.2	71.2	5.6

Table 18 (Continued)

PCB Congener	LCS1 B3 41237 A05F7 Sediment % Recovery	LCS2 B3 41238 A05F8 Sediment % Recovery	Sediment Mean % Recovery	RPD n=2
OctaPCB(195)	76.8	72.6	74.7	5.7
OctaPCB(194)	71.4	71.4	71.4	0.0
OctaPCB(205)	70.7	75.1	72.9	6.0
NonaPCB(208)	73.3	70.7	72.0	3.6
NonaPCB(207)	70.7	71.3	71.0	0.8
NonaPCB(206)	78.1	81.4	79.7	4.2
DecaPCB(209)	72.5	65.5	69.0	10.1

[a] Lab ID Code- LCS1 designates laboratory control spike 1; LCS2 is spike 2; and B designates Batch number

Table 19. Congener Specific PCBs Surrogate Recoveries for Water Matrix (%)

PCB Surrogate	Date File Sample	12/18/98 L18F09 Spike Check	1/4/99 A04F01 Spike Check	12/18/98 L18F11 MB	12/18/98 L18F12 LCS	12/18/98 L18F13 LCS	12/18/98 L18F14 41140	12/21/98 L21F01 41141	12/21/98 L21F02 41142	12/21/98 L21F03 41143	12/21/98 L21F04 41144	12/21/98 L21F05 41145
13C 6 Mono		88.1	87.9	65.6	74.3	72.8	68.3	60	63.2	73.9	63.9	69.6
13C12 Tri		89.6	90.3	61.3	84	85.6	81.5	77.2	79.2	85.8	76.7	82.3
13C12 Tetra		96.1	92.4	82.7	86	90.6	90.9	82.9	86.5	83.7	85	85.2
13C12 Hexa		87.4	81	86.5	91.1	93.2	93.1	86.7	96.6	93	89.1	93.9
13C12 Octa		84.2	76.4	80.9	84.4	82	84.8	80.3	87.7	87.4	85.9	86.7
13C12 Deca		88.1	71.4	79.1	84.3	83.6	86.7	80.9	88.4	85.5	83.6	84

Table 19 (Continued)

PCB Surrogate	12/21/98 L21F06 41146	12/21/98 L21F07 41147	12/21/98 L21F08 41148	12/21/98 L21F09 41149	12/21/98 L21F10 41150	12/21/98 L21F11 41151	1/4/99 A04F02 MB	1/4/99 A04F03 LCS	1/4/99 A04F04 41195	1/4/99 A04F05 41182	1/4/99 A04F06 41183	1/4/99 A04F07 41184	1/4/99 A04F08 41185
13C 6 Mono	83.5	65.1	61.8	58.3	53.5	63.2	60.1	60.9	55	65.1	66.5	67	73.6
13C12 Tri	85.1	84.3	77.8	64.7	70.8	76.7	74.1	68.1	65.5	79.7	73.1	77.4	81.1
13C12 Tetra	91.8	84.1	63.1	70.2	74.4	84	78.5	70.1	71.7	82.6	76.2	76.8	83.7
13C12 Hexa	99.2	90.7	77.6	69.9	78.4	85.6	77	71.1	73.7	82.8	72.4	76.1	80.5
13C12 Octa	91.9	86.9	75	64.9	73.7	80.3	69.8	64.1	64.2	74.1	67.8	69	71.5
13C12 Deca	88.5	83.9	71.3	64.2	73.2	78.7	69.8	62.7	62.3	71.8	65.2	66.3	70.4

Table 19 (Continued)

PCB Surrogate	1/4/99 A04F09 41187	1/4/99 A04F10 41188	1/4/99 A04F11 41189	1/4/99 A05F03 41190	1/4/99 A05F04 41191	1/4/99 A05F05 41192	1/4/99 A05F06 41193	Mean	Stdev n=29
13C 6 Mono	69.7	64	67.4	52.7	58.8	67.1	71.8	65.3	6.9
13C12 Tri	80.4	75.2	79.1	71.6	67.8	78.4	78.4	77.3	5.9
13C12 Tetra	81.2	82	82.8	75.3	69.6	79.4	80.2	81.1	6.0
13C12 Hexa	80.6	77.2	79.2	74	68.9	72.5	75.7	82.3	8.9
13C12 Octa	71.1	69.7	71.1	63.5	58.1	62.6	64.2	75.0	9.5
13C12 Deca	68.6	68.2	68	57.3	53.1	57.7	58.2	72.9	10.6

Table 20. Congener Specific PCB Recoveries for Sediment Matrix (%)

PCB Surrogate	Date File Sample	1/5/99 A05F01 Spike Check	1/5/99 A05F02 MB	1/5/99 A05F07 LCS	1/5/99 A05F08 LCS	1/5/99 A05F09 41233	1/5/99 A05F10 41234	1/5/99 A05F11 41235	1/5/99 A05F12 41236	Mean	Stdev n=7
13C 6 Mono		93	46.2	44.5	47.3	74.3	66.4	68.4	56.2	57.6	12.1
13C12 Tri		91.1	76.8	64.3	71.8	103.1	95.1	99.4	80.2	84.4	14.9
13C12 Tetra		93.7	64.6	71.2	75.7	96.9	104.1	111.1	82.7	89.5	14.9
13C12 Hexa		84.1	84.4	80.1	79.8	75	74.3	81.7	66.7	77.4	5.9
13C12 Octa		72.8	73.5	70.2	89.3	54.3	53.2	55.4	46.3	60.3	10.5
13C12 Deca		65.4	66.2	64.5	62.8	35.5	33.9	36.3	30.3	47.1	16.4

Appendix A

Sample Receipt Records

SAMPLE RECEIPT CHECKLIST

MRI Project No. 5356-01

Samples Received by: Mike Cheramy Date: 10/23/98

Airbill No. 808 941 771 411 Chain-of-Custody No. _____

Airbill present? (Yes) No Chain-of-Custody present? Yes (No)

Shipping container intact? (Yes) No Container type Small Red Cooler

Custody seals present? Yes (No) Seals intact? Yes (No) Seal Location: N/A

C-O-C properly filled out? Yes (No) Does C-O-C indicate sample type? Yes (No)

Ice packs or ice frozen? (Yes) No Samples cold? (Yes) No Temperature °C: 5.5°

Sample containers intact? (Yes) No Labels permanently affixed? (Yes) No

Sample containers leaking? Yes (No) Container type indicated? Yes No

Are all samples properly labeled and accounted for? (Yes) No

Are samples stored as indicated by the project leader? (Yes) No

Is the C-O-C filled out completely, signed, and dated? Yes (No) N/A

If pH check upon receipt is required, indicate where it is recorded. N/A

Sample storage location: 330-E Coldroom

COMMENTS

USACE: Pedricktown 10/15/98 @ 0915

ID: INLET 10/15/98. 10/23/98 M. Cheramy

MRI-QA\MRI-5003.DOC

Sample Master LIMS
Sample Login Report

Customer Name: Versar

Project ID: 0918-158 5356

Order Comment: Received from MRI dock by M.Cheramy.

Order ID: 981000019

Order Date: 10/23/98

Page: 1 of 1

MRI Sample ID	Customer Sample ID	Matrix	Quantity	Date Collected	Date Received	Test	Test Group	Method	Due Date
98003391	ID: INLET USACE: Pedricktown	Liquid	1	10/15/98 12:00 AM	10/23/98 2:43 PM	test_smv			

SAMPLE CONDITION RECORD

Are samples submitted with a chain of custody?	No
Are the number of samples the same as stated on the chain of custody?	N/A
Are bottle caps tight and securely in place?	Yes
Were all containers intact when received?	Yes
Were samples submitted in an ice chest?	Yes
Were samples received cold?	Yes
Were samples within the holding time for the requested test(s)?	Yes
Is the volume of sample submitted sufficient for the requested test(s)?	Yes
Are all samples for volatile organic analyses free of headspace?	N/A

10/23/98

M. Cheramy

RB 12/7/98 extract both water & sediment

APPENDIX A

SAMPLE RECEIPT CHECKLIST

MRI Project No. 53596 BE mmc 11/4/98

Samples Received by: Mike Cheramy Date: 11/04/98

Airbill No. 808 941 771 466 Chain-of-Custody No. 5551

Airbill present? (Yes) No Chain-of-Custody present? (Yes) No

Shipping container intact? (Yes) No Container type Cooler

Custody seals present? Yes (No) Seals intact? (Yes) No Seal Location: N/A

C-O-C properly filled out? Yes No Does C-O-C indicate sample type? Yes No

Ice packs or ice frozen? (Yes) No Samples cold? (Yes) No Temperature °C: 2°

Sample containers intact? (Yes) No Labels permanently affixed? (Yes) No

Sample containers leaking? Yes (No) Container type indicated? Yes (No)

Are all samples properly labeled and accounted for? (Yes) No

Are samples stored as indicated by the project leader? (Yes) No

Is the C-O-C filled out completely, signed, and dated? (Yes) No

If pH check upon receipt is required, indicate where it is recorded. N/A

Sample storage location: 370 - E

COMMENTS

7 liquid Samples for High-Resolution PCB Analysis. 5 Ambers, 2 Clear glass Jars. Client COC not Signed. 11/04/98 M. Cheramy.

MRI-QA\MRI-5003.DOC

Sample Master LIMS
Sample Login Report

Customer Name: Versar

Project ID: 5356 - 01

Order Comment: Received from MRI dock by M. Cheramy.

Order ID: 981100006

Order Date: 11/4/98

Page: 1 of 1

MRI Sample ID	Customer Sample ID	Matrix	Quantity	Date Collected	Date Received	Test	Test Group	Method	Due Date
98003502	NIX1102 USACE: Pedricktown	Liquid	1	11/2/98 12:00 AM	11/4/98 2:30 PM	test_smv			
98003503	INLET1102 USACE: Pedricktown	Liquid	1	11/2 98 12:00 AM	11/4/98 2:30 PM	test_smv			
98003504	WEIR1102 USACE: Pedricktown	Liquid	1	11/2/98 12:00 AM	11/4/98 2:30 PM	test_smv			
98003505	INLET102698 USACE: Pedricktown	Liquid	1	10 26 98 12:00 AM	11/4.98 2:30 PM	test_smv			
98003506	NIX102998 USACE: Pedricktown	Liquid	1	10 29 98 12:00 AM	11/4/98 2:30 PM	test_smv			
98003507	BG102998 USACE: Pedricktown	Liquid	1	10/29/98 12:00 AM	11/4/98 2:30 PM	test_smv			
98003508	WEIR102998 USACE: Pedricktown	Liquid	1	10 29 98 12:00 AM	11/4.98 2:30 PM	test_smv			

SAMPLE CONDITION RECORD

Are samples submitted with a chain of custody? Yes # 5551

Are the number of samples the same as stated on the chain of custody? Yes 11/04/98 by M. Cheamy

Are bottle caps tight and securely in place? Yes

Were all containers intact when received? Yes

Were samples submitted in an ice chest? Yes

Were samples received cold? Yes

Were samples within the holding time for the requested test(s)? Yes

Is the volume of sample submitted sufficient for the requested test(s)? Yes

Are all samples for volatile organic analyses free of headspace? N/A

APPENDIX A

Versar

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME	INDUSTRIAL HYGIENE SAMPLE Y / N
4119-007	PACOE Pedricktown	

SAMPLERS: (Signature) (Printed)

PARAMETERS: RCB-Filter

FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS									REMARKS
MIX1102		1100		✓	Pedricktown NJ	1	1								
INLET 1102		1100		✓		1	1								
WEIR 1102		930	✓			1	1								Bottle Cap Chipped.
INLET 102698		1330		✓		1	1								
MIX 102998		1200		✓		1	1								
BG 102998		945		✓		1	1								
WEIR 102998		1030	✓			1	1								

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
(Printed)		(Printed)	(Printed)		(Printed)

Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks No Signature for Relinquishment.
(Printed)		Mike Cheramy / MRI (Printed) MRI Mike Cheramy	11/04/98 14:21 11/04/98	

Distribution: Original Plus One Accompanies Shipment; [illegible]

APPENDIX A

SAMPLE RECEIPT CHECKLIST

MRI Project No. 5356-01

Samples Received by: Mike Cheamy Date: 12/01/98

Airbill No. 802 924 236 470 Chain-of-Custody No. 94403

Airbill present? (Yes) No · Chain-of-Custody present? (Yes) No

Shipping container intact? (Yes) No Container type Coleman Cooler

Custody seals present? (Yes) No Seals intact? (Yes) No Seal Location: lid interface

C-O-C properly filled out? Yes No Does C-O-C indicate sample type? Yes No

Ice packs or ice frozen? (Yes) No Samples cold? (Yes) No Temperature °C: 5.5°

Sample containers intact? (Yes) No Labels permanently affixed? (Yes) No

Sample containers leaking? Yes (No) Container type indicated? Yes (No)

Are all samples properly labeled and accounted for? (Yes) No

Are samples stored as indicated by the project leader? (Yes) No

Is the C-O-C filled out completely, signed, and dated? (Yes) No

If pH check upon receipt is required, indicate where it is recorded. N/A

Sample storage location: 330-E Coldroom

COMMENTS

11 1-liter glass JARS of liquid samples. M. Cheamy.

MRI-QA\MRI-5003.DOC

ENVIRONMENTAL SERVICES

CHAIN-OF-CUSTODY RECORD

Project Contact: Jessica Farrar

Turn Around Requirements:

Project No.: 4119-007

Project Name: Fredrickson

Sampler (print): EK

Signature: EK

Sample I.D. No.	Comp*	Grab	Date	Time	Protocol CWA	Protocol SW846	NUMBER OF SAMPLES	Hold	th PCB	ADDITIONAL REQUIREMENTS
EB112578	✓	X		11/25/98		X	1		1	
~~MIX1119~~	~~✓~~	~~X~~		~~11/19/98~~			~~1~~		~~1~~	
BG1116	✓	X		11/16/98			1		1	
MIX1116	✓	X		11/16/98			1		1	
WEIR1116	✓	X		11/16/98			1		1	
WEIR110598	✓	X		11/05/98			1		1	
~~WEIR1124~~	~~X~~			~~11/24/98~~						
~~WEIR1119~~	~~X~~			~~11/19/98~~						
WEIR1112	✓	X		11/12/98			1		1	
WEIR1109	✓	X		11/9/98			1		1	
BG1112	✓	X		11/12/98			1		1	
~~BG1119~~		~~X~~		~~11/19/98~~						
~~MIX1112~~		~~X~~		~~11/12/98~~						
MIX1109	✓	X		11/09/98			1		1	
INLET110598	✓	X		11/05/98			1		1	
MIX110598	✓	X		11/05/98			1		1	
Temp Blank	✓						1		1	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
[signature]	11/30/98		Mike Cheaney MRI Mike Cheaney				

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:
			MRI Mike Cheaney Mike Cheaney	12/1/98	10:27 AM	11 Samples received intact.

*Homogenize all composite samples prior to analysis

White – Lab Yellow – Office Pink – Field

APPENDIX A

Sampl[illegible]aster LIMS
Sample Login Report

Customer Name: Versar

Project ID: 5356

Order Comment: Received from MRI dock at 9:55 by M. Cheramy. M. Cheramy

Order ID: 981200003

Order Date: 12/1/98

MRI Sample ID	Customer Sample ID	Matrix	Quantity	Date Collected	Date Received	Test	Test Group	Method	Due Date
98003625	EB112578 EB112578	Water	1	11/25/98 12:00 AM	12/1/98 2:21 PM	test_smv			12/29/98 2:21:3
98003626	BG1116 BG1116	Water	1	11/16/98 12:00 AM	12/1/98 2:21 PM	test_smv			12/29/98 2:21:3
98003627	MIX1116 MIX1116	Water	1	11/16/98 12:00 AM	12/1/98 2:21 PM	test_smv			12/29/98 2:21:3
98003628	WEIR1116 WEIR1116	Water	1	11/16/98 12:00 AM	12/1/98 2:21 PM	test_smv			12/29/98 2:21:3
98003629	WEIR110598 WEIR110598	Water	1	11/5/98 12:00 AM	12/1/98 2:21 PM	test_smv			12/29/98 2:21:3
98003630	WEIR1112 WEIR1112	Water	1	11/12/98 12:00 AM	12/1/98 2:21 PM	test_smv			12/29/98 2:21:3
98003631	WEIR1109 WEIR1109	Water	1	11/9/98 12:00 AM	12/1/98 2:21 PM	test_smv			12/29/98 2:21:3
98003632	BG1112 BG1112	Water	1	11/12/98 12:00 AM	12/1/98 2:21 PM	test_smv			12/29/98 2:21:3
98003633	MIX1109 MIX1109	Water	1	11/9/98 12:00 AM	12/1/98 2:21 PM	test_smv			12/29/98 2:21:3
98003634	INLET110595 INLET110598	Water	1	11/5/98 12:00 AM	12/1/98 2:21 PM	test_smv			12/29/98 2:21:3
98003635	MIX110598 MIX110598	Water	1	11/5/98 12:00 AM	12/1/98 2:21 PM	test_smv			12/29/98 2:21:3

Sample Master LIMS
Sample Login Report

Customer Name: Versar

Project ID: 5356

Order Comment: Received from MRI dock at 9:55 by M. Cheramy.

Order ID: 981200003

Order Date: 12/1/98

RI Sample ID	Customer Sample ID	Matrix	Quantity	Date Collected	Date Received	Test	Test Group	Method	Due Date

SAMPLE CONDITION RECORD

12/01/98 by M. Cheramy

Are samples submitted with a chain of custody?	Yes ✓
Are the number of samples the same as stated on the chain of custody?	Yes ✓
Are bottle caps tight and securely in place?	Yes ✓
Were all containers intact when received?	Yes ✓
Were samples submitted in an ice chest?	Yes ✓
Were samples received cold?	Yes ✓
Were samples within the holding time for the requested test(s)?	Yes ✓
Is the volume of sample submitted sufficient for the requested test(s)?	Yes ✓
Are all samples for volatile organic analyses free of headspace?	N/A ✓

SAMPLE RECEIPT CHECKLIST

MRI Project No. 5356-01

Samples Received by: Mike Cheramy Date: 12/1/98 (10:41)

Airbill No. 8029 2423 6470 Chain-of-Custody No. 94404

Airbill present? (Yes) No Chain-of-Custody present? (Yes) No

Shipping container intact? (Yes) No Container type Small Igloo Cooler

Custody seals present? (Yes) No Seals intact? (Yes) No Seal Location: lid interface

C-O-C properly filled out? (Yes) No Does C-O-C indicate sample type? (Yes) No

Ice packs or ice frozen? (Yes) No Samples cold? (Yes) No Temperature °C: 5.5°

Sample containers intact? (Yes) No Labels permanently affixed? (Yes) No

Sample containers leaking? Yes (No) Container type indicated? Yes (No)

Are all samples properly labeled and accounted for? (Yes) No

Are samples stored as indicated by the project leader? (Yes) No

Is the C-O-C filled out completely, signed, and dated? (Yes) No

If pH check upon receipt is required, indicate where it is recorded. N/A

Sample storage location: 330-E Coldroom

COMMENTS

MW 1119 Present but not listed on COC #94404 listed but lined-out on COC #94403. 12/1/98 M Cheramy

MRI-QA\MRI-5003.DOC

ENVIRONMENTAL SERVICES

CHAIN-OF-CUSTODY RECORD

Project Contact: Jessica Farrar

Turn Around Requirements:

Project No.: 4119-001 Project Name: Pedricktown

Sampler (print): EK Signature: EK

Sample I.D. No.	Comp*	Grab	Date	Time	Protocol CWA	Protocol SW846	NUMBER OF SAMPLES	Hold	Hg, Pb, PCBs	ADDITIONAL REQUIREMENTS
WEIR 1119	X		11/19/98			X	1		1	
WEIR 1124	X		11/24/98				1		1	
MIX 1112		X	11/12/98				1		1	
DG 1119		X	11/19/98				1		1	
tempblank							1			

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
[signature]	11/30						

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks
			Mike Cheamy / Mike Cheamy	12/1/98	10:30 AM	Sample MIX 1119 present, but not listed on this COC, listed on COC94403 but lined out. 12/1/98 M. Cheamy

*Homogenize all composite samples prior to analysis

White – Lab Yellow – Office Pink – Field

APPENDIX A

Sam[illegible] Master LIMS
Sample Login Report

Customer Name: Versar

Project ID: 5356

Order Comment: Received from MRI dock at 9:55 AM by M. Cheramy.

Order ID: 981200004

Order Date: 12/1/98

Page: 1 of 1

MRI Sample ID	Customer Sample ID	Matrix	Quantity	Date Collected	Date Received	Test	Test Group	Method	Due Date
98003636	WEIR1119 Pedricktown	Water	4	11/19/98 12:00 AM	12/1/98 3:18 PM	test_smv			12/29/98 3:18:1
98003637	WEIR1124 Pedricktown	Water	1	11/24/98 12:00 AM	12/1/98 3:18 PM	test_smv			12/29/98 3:18:1
98003638	MIX1112 Pedricktown	Water	1	11/12/98 12:00 AM	12/1/98 3:18 PM	test_smv			12/29/98 3:18:1
98003639	BG1119 Pedricktown	Water	1	11/19/98 12:00 AM	12/1/98 3:18 PM	test_smv			12/29/98 3:18:1
98003640	MIX1119 Pedricktown	Water	1	11/19/98 12:00 AM	12/1/98 3:18 PM	test_smv			12/29/98 3:18:1

SAMPLE CONDITION RECORD

Are samples submitted with a chain of custody? Yes

Are the number of samples the same as stated on the chain of custody? No MIX1119 Present but not

Are bottle caps tight and securely in place? Yes listed on field COC. lined-out

Were all containers intact when received? Yes on COC # 94403.

Were samples submitted in an ice chest? Yes

Were samples received cold? Yes 12/01/98 by M. Cheramy

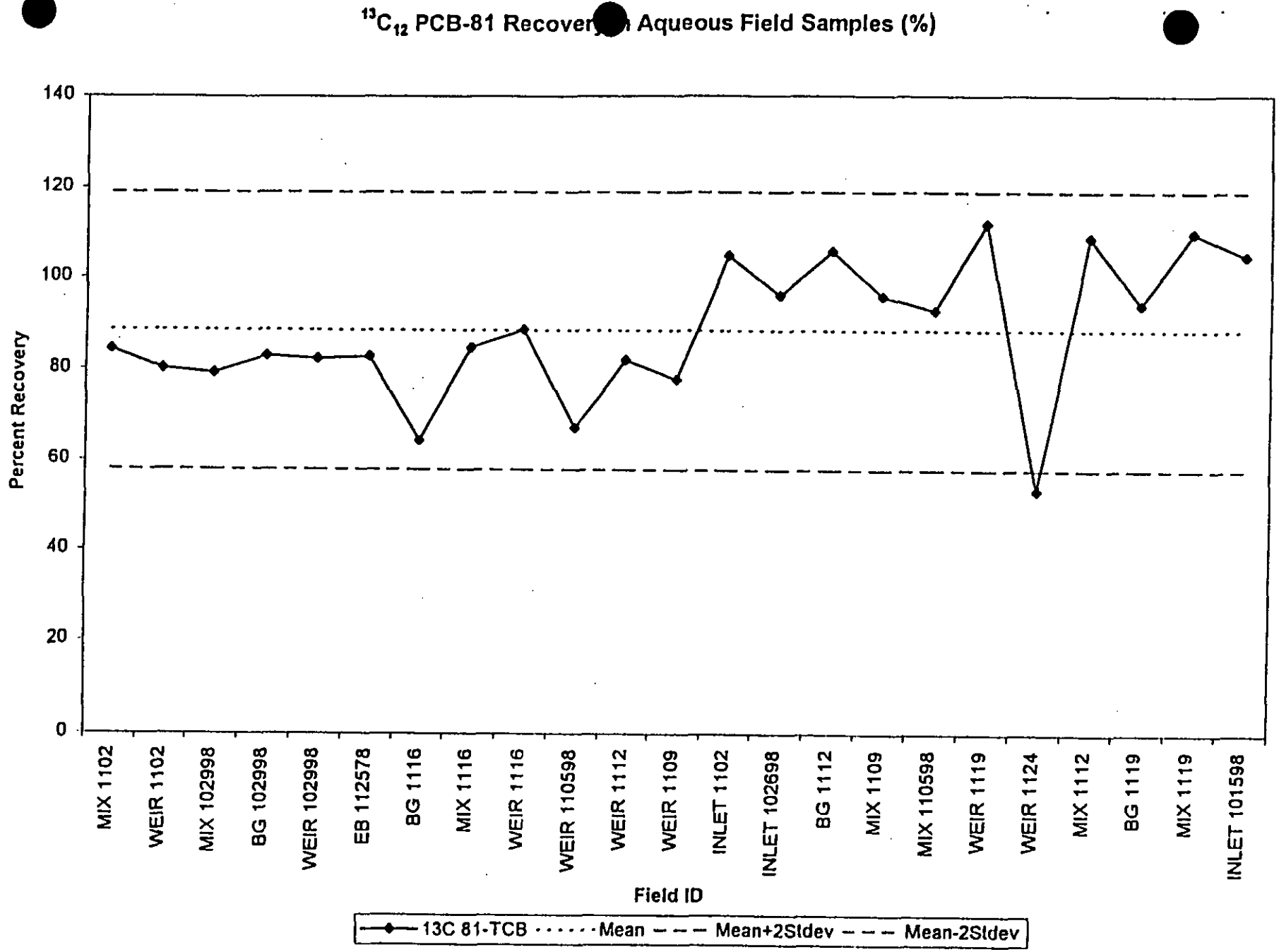
Were samples within the holding time for the requested test(s)? Yes

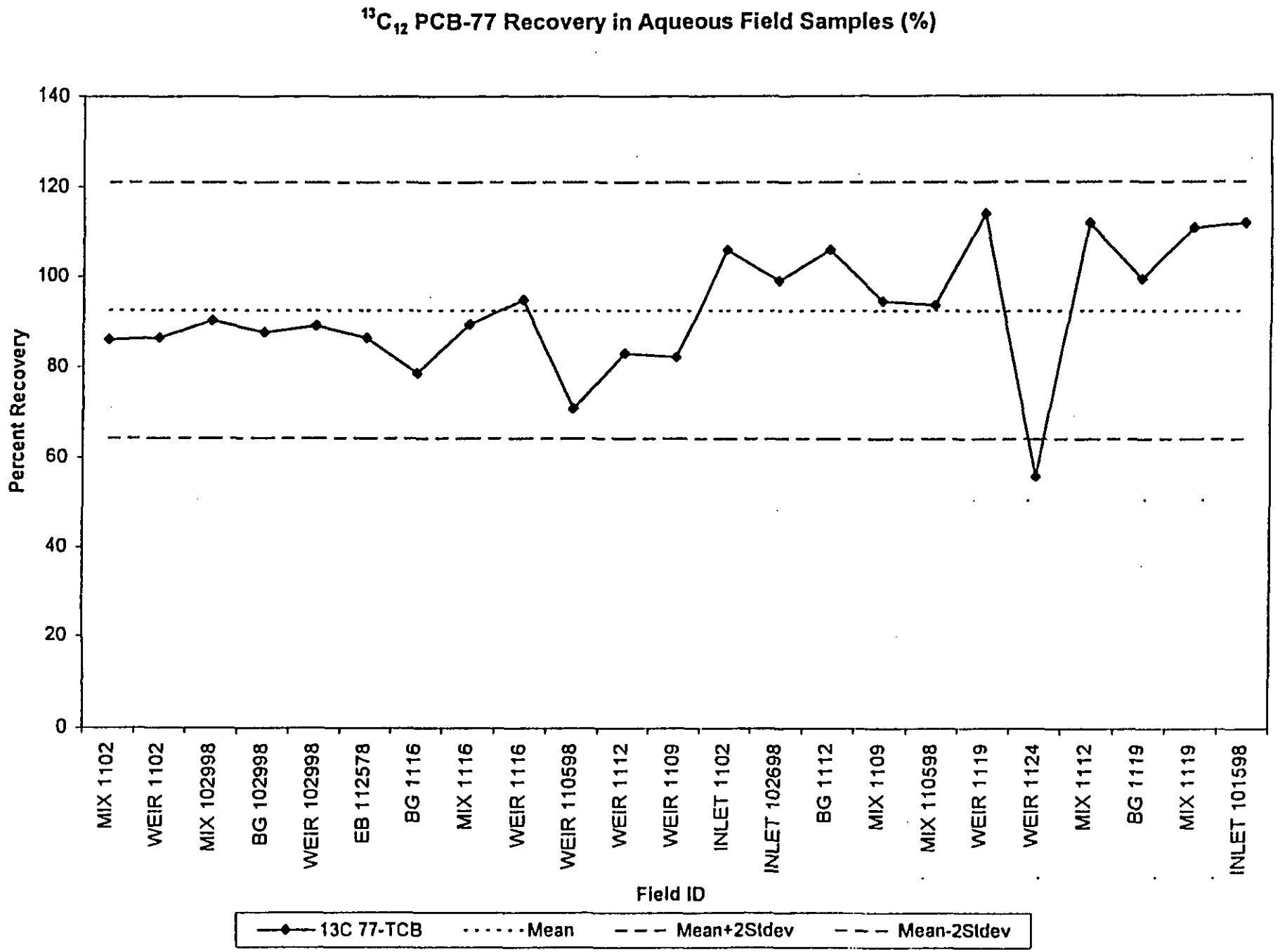
Is the volume of sample submitted sufficient for the requested test(s)? Yes

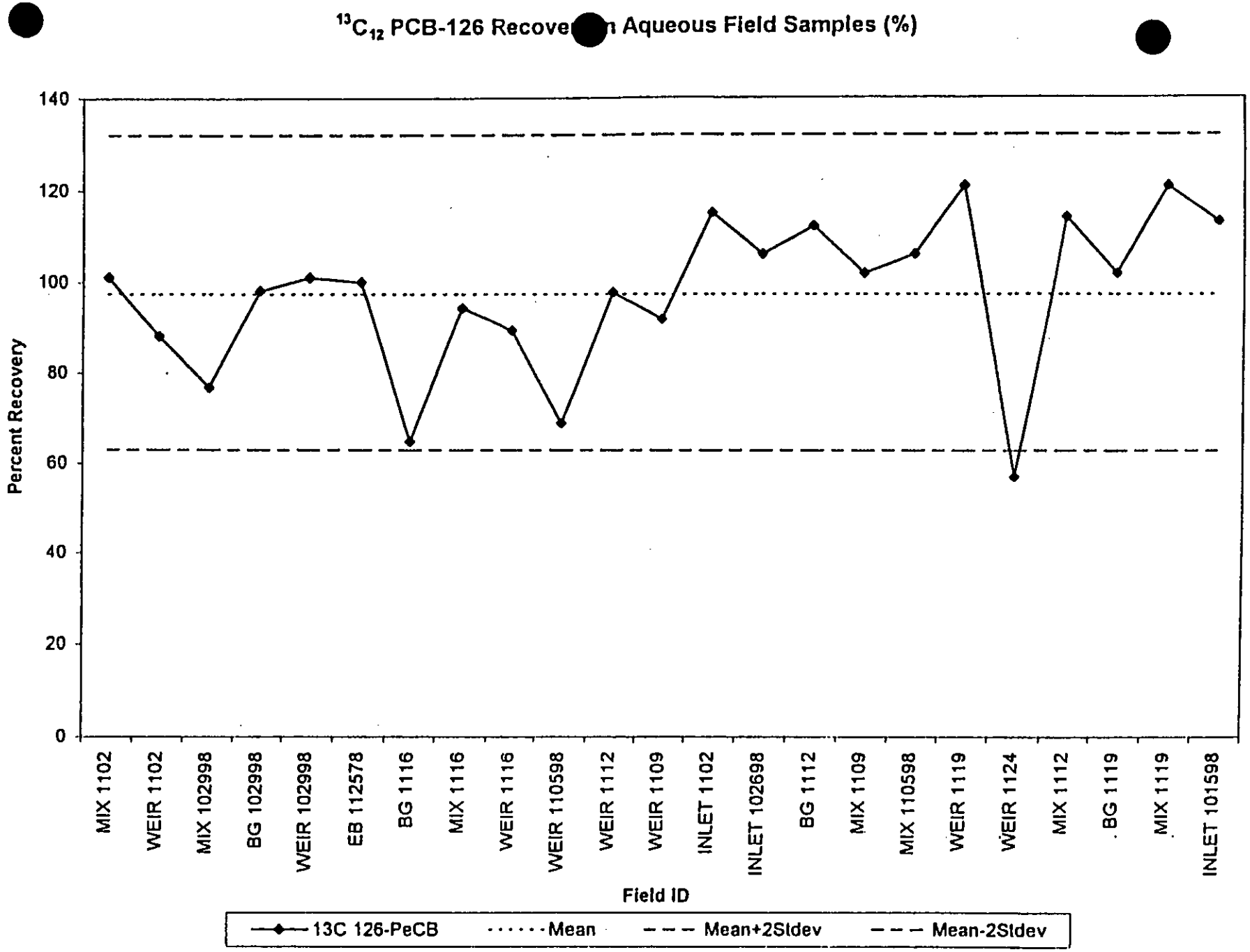
Are all samples for volatile organic analyses free of headspace? N/A

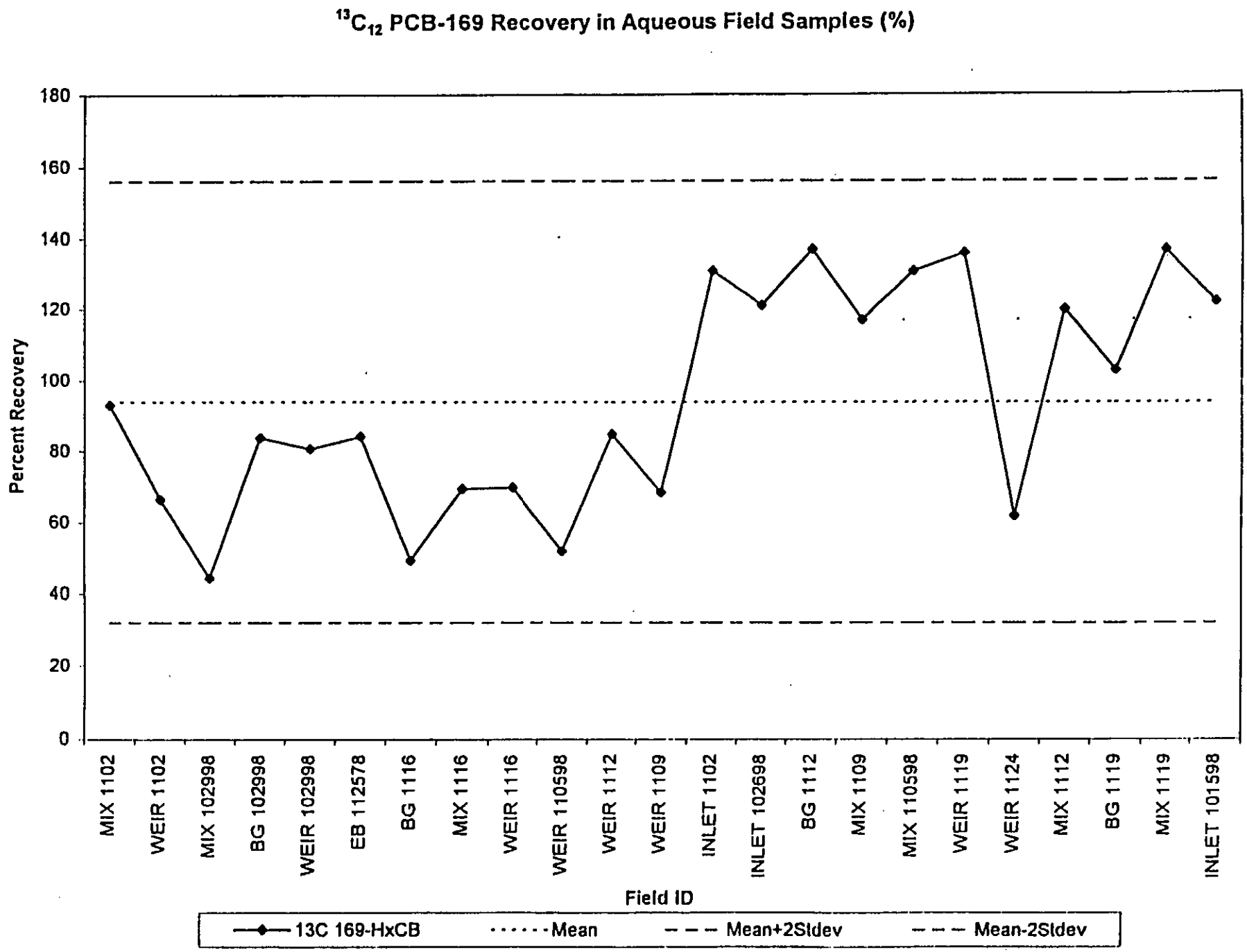
Appendix B

Performance Charts for $^{13}C_{12}$ Coplanar PCB Internal Quantitation Standards


$^{13}C_{12}$ PCB-81 Recovery in Aqueous Field Samples (%)
Percent Recovery
140
120
100
80
60
40
20
0
MIX 1102
WEIR 1102
MIX 102998
BG 102998
WEIR 102998
EB 112578
BG 1116
MIX 1116
WEIR 1116
WEIR 110598
WEIR 1112
WEIR 1109
INLET 1102
INLET 102698
BG 1112
MIX 1109
MIX 110598
WEIR 1119
WEIR 1124
MIX 1112
BG 1119
MIX 1119
INLET 101598
Field ID
13C 81-TCB
Mean
Mean+2Stdev
Mean-2Stdev


$^{13}C_{12}$ PCB-77 Recovery in Aqueous Field Samples (%)
Percent Recovery
140
120
100
80
60
40
20
0
MIX 1102
WEIR 1102
MIX 102998
BG 102998
WEIR 102998
EB 112578
BG 1116
MIX 1116
WEIR 1116
WEIR 110598
WEIR 1112
WEIR 1109
INLET 1102
INLET 102698
BG 1112
MIX 1109
MIX 110598
WEIR 1119
WEIR 1124
MIX 1112
BG 1119
MIX 1119
INLET 101598
Field ID
13C 77-TCB
Mean
Mean+2Stdev
Mean-2Stdev


$^{13}C_{12}$ PCB-126 Recovery in Aqueous Field Samples (%)
Percent Recovery
140
120
100
80
60
40
20
0
MIX 1102
WEIR 1102
MIX 102998
BG 102998
WEIR 102998
EB 112578
BG 1116
MIX 1116
WEIR 1116
WEIR 110598
WEIR 1112
WEIR 1109
INLET 1102
INLET 102698
BG 1112
MIX 1109
MIX 110598
WEIR 1119
WEIR 1124
MIX 1112
BG 1119
MIX 1119
INLET 101598
Field ID
13C 126-PeCB
Mean
Mean+2Stdev
Mean-2Stdev

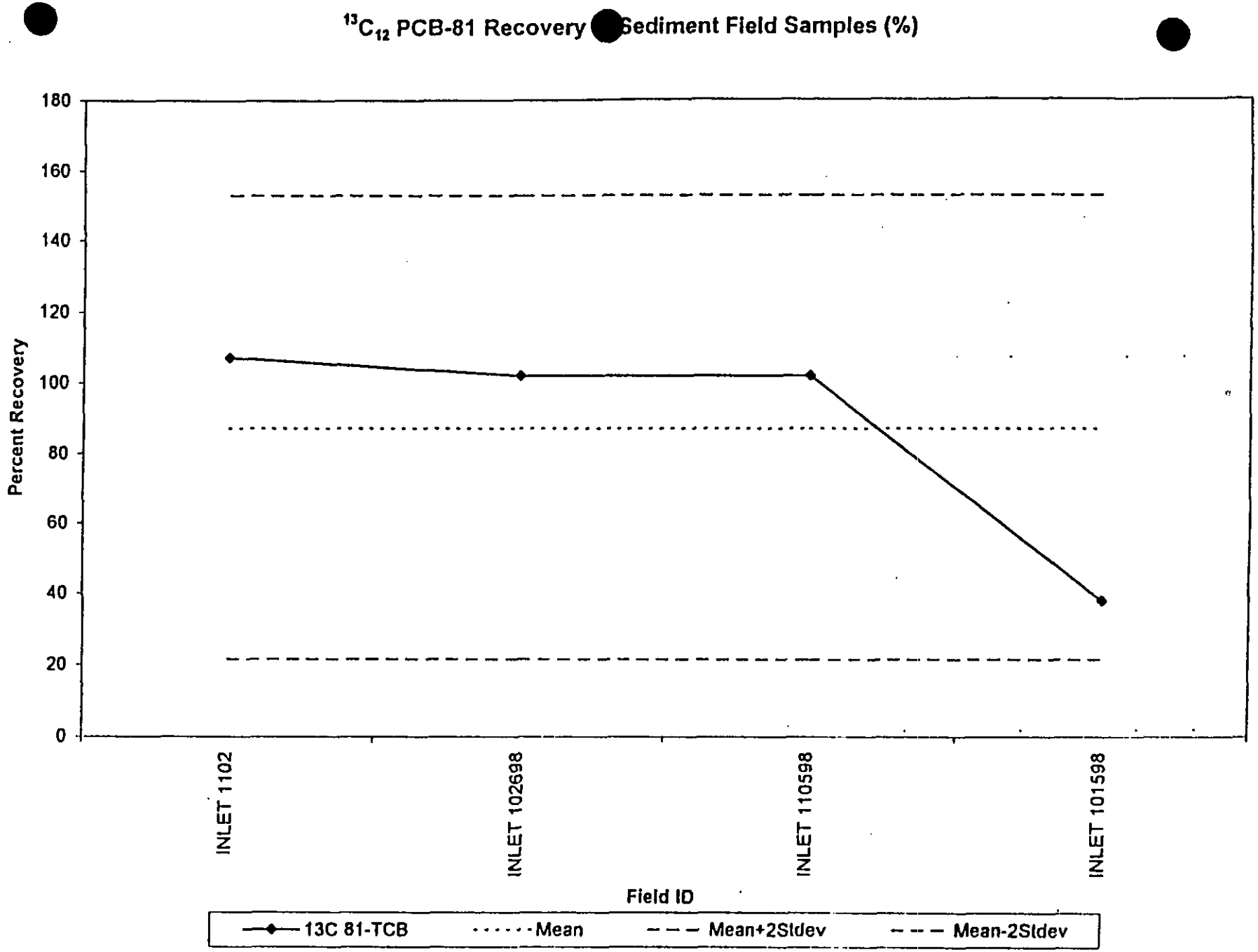

$^{13}C_{12}$ PCB-169 Recovery in Aqueous Field Samples (%)
Percent Recovery
180
160
140
120
100
80
60
40
20
0
MIX 1102
WEIR 1102
MIX 102998
BG 102998
WEIR 102998
EB 112578
BG 1116
MIX 1116
WEIR 1116
WEIR 110598
WEIR 1112
WEIR 1109
INLET 1102
INLET 102698
BG 1112
MIX 1109
MIX 110598
WEIR 1119
WEIR 1124
MIX 1112
BG 1119
MIX 1119
INLET 101598
Field ID
13C 169-HxCB
Mean
Mean+2Stdev
Mean-2Stdev

INORGANIC QA/QC

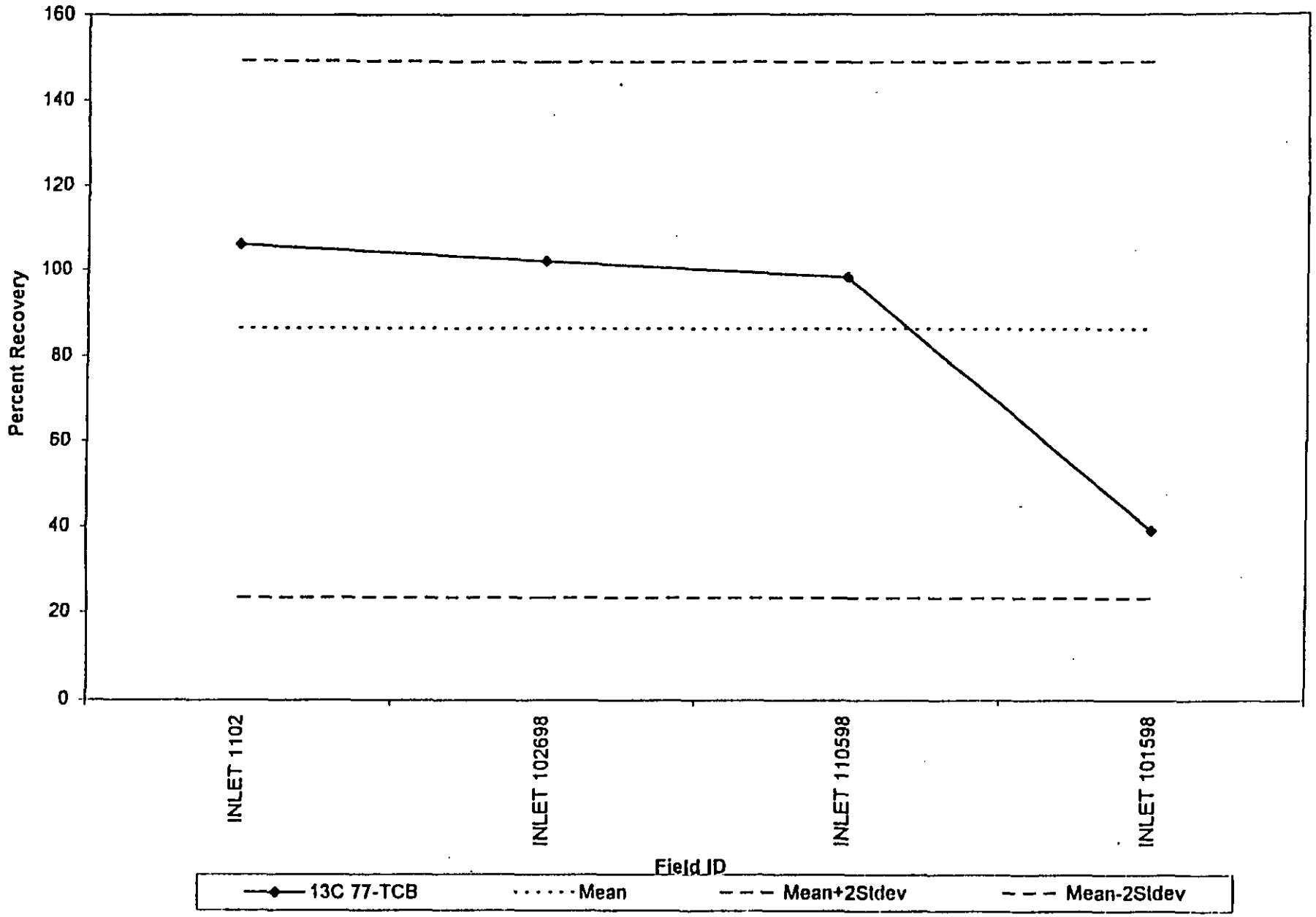
Kemron
ENVIRONMENTAL SERVICES

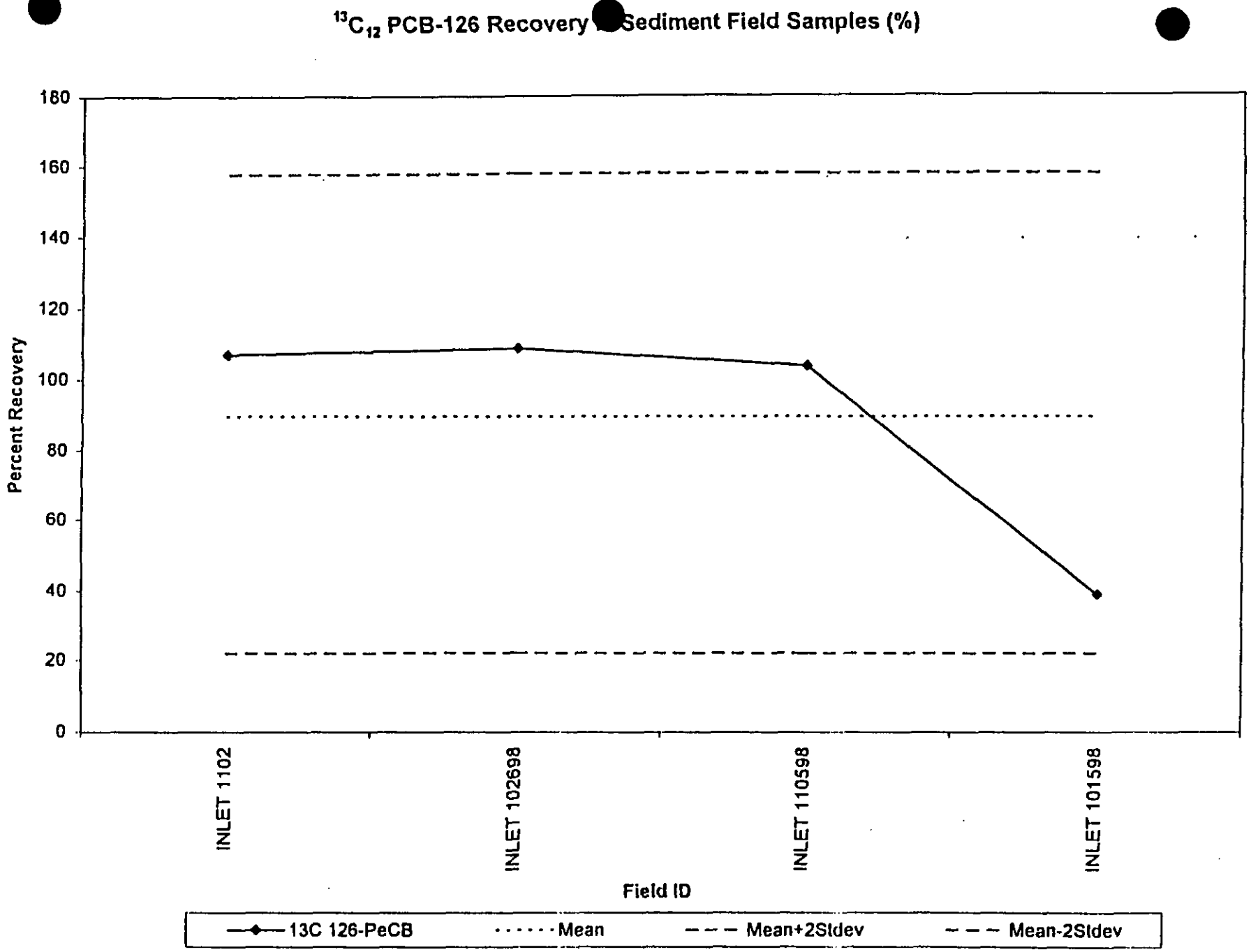
APPENDIX D

Pedricktown North Confined Disposal Facility
Total Maximum Daily Load Data

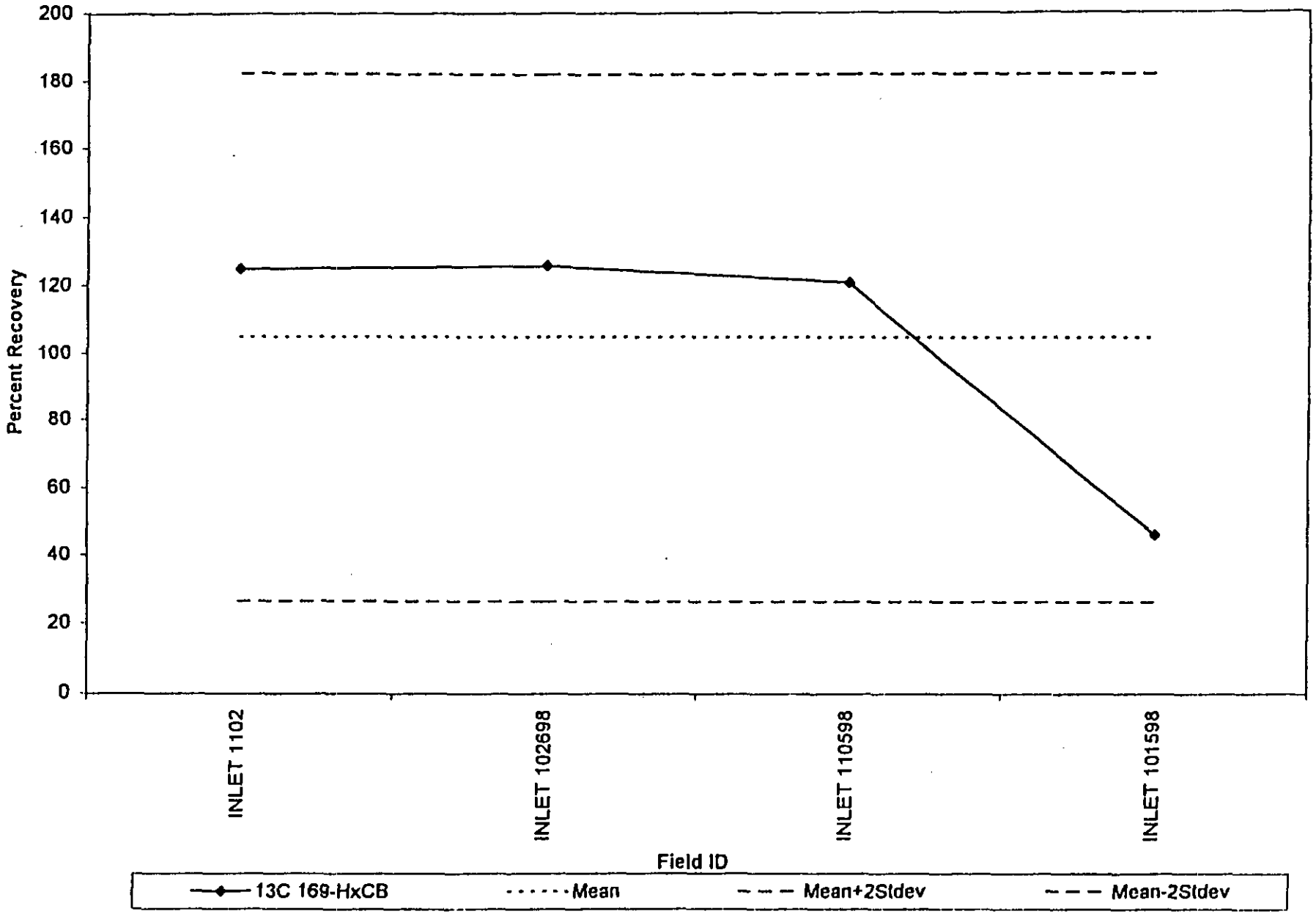

$^{13}C_{12}$ PCB-81 Recovery Sediment Field Samples (%)
Percent Recovery
180
160
140
120
100
80
60
40
20
0
INLET 1102
INLET 102698
INLET 110598
INLET 101598
Field ID
13C 81-TCB
Mean
Mean+2Stdev
Mean-2Stdev

$^{13}C_{12}$ PCB-77 Recovery in Sediment Field Samples (%)




$^{13}C_{12}$ PCB-126 Recovery Sediment Field Samples (%)
Percent Recovery
180
160
140
120
100
80
60
40
20
0
INLET 1102
INLET 102698
INLET 110598
INLET 101598
Field ID
13C 126-PeCB
Mean
Mean+2Stdev
Mean-2Stdev

$^{13}C_{12}$ PCB-169 Recovery in Sediment Field Samples (%)

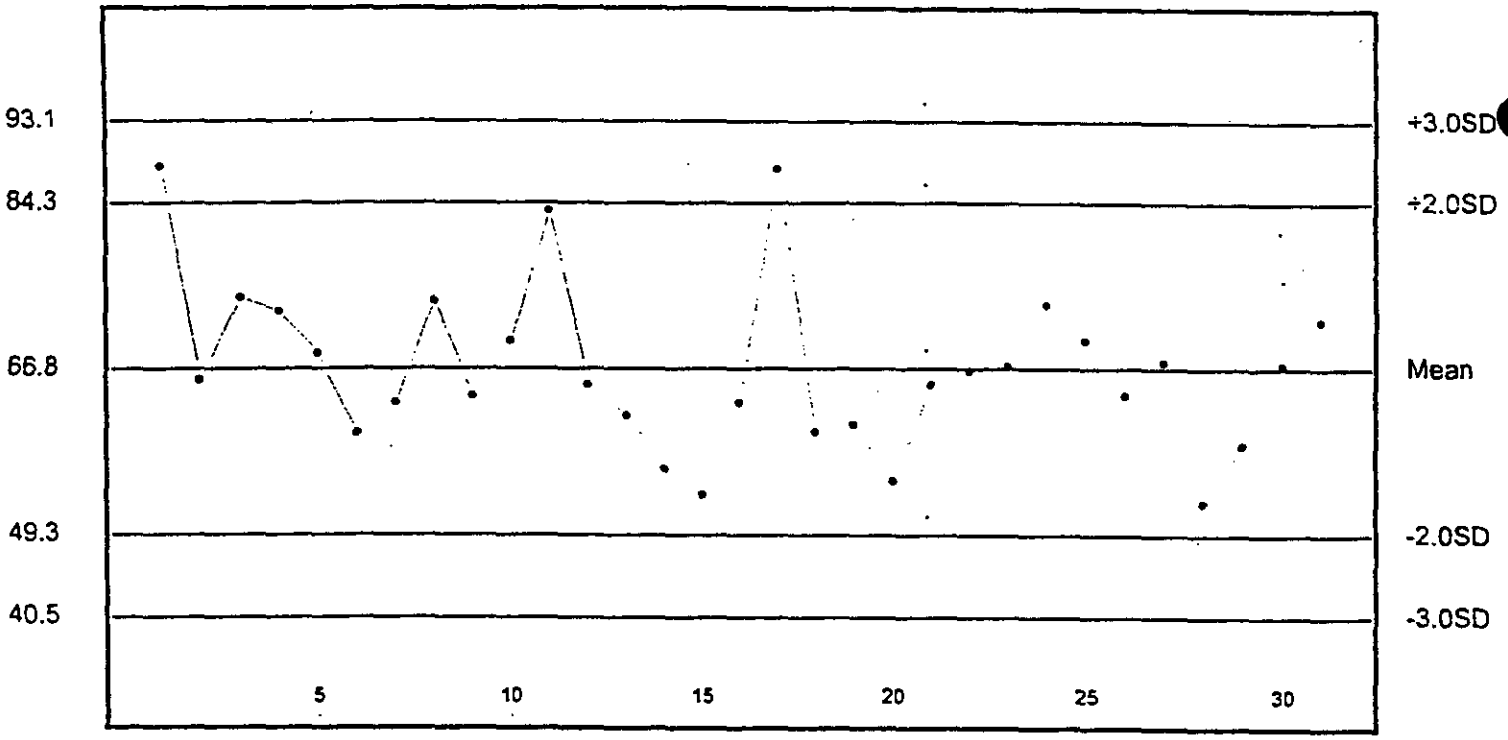


Appendix C

Performance Charts for $^{13}C_{12}$ PCB Surrogate Recoveries

SURROGATE RECOVERY SUMMARY. VERSAR [PCB] WATER

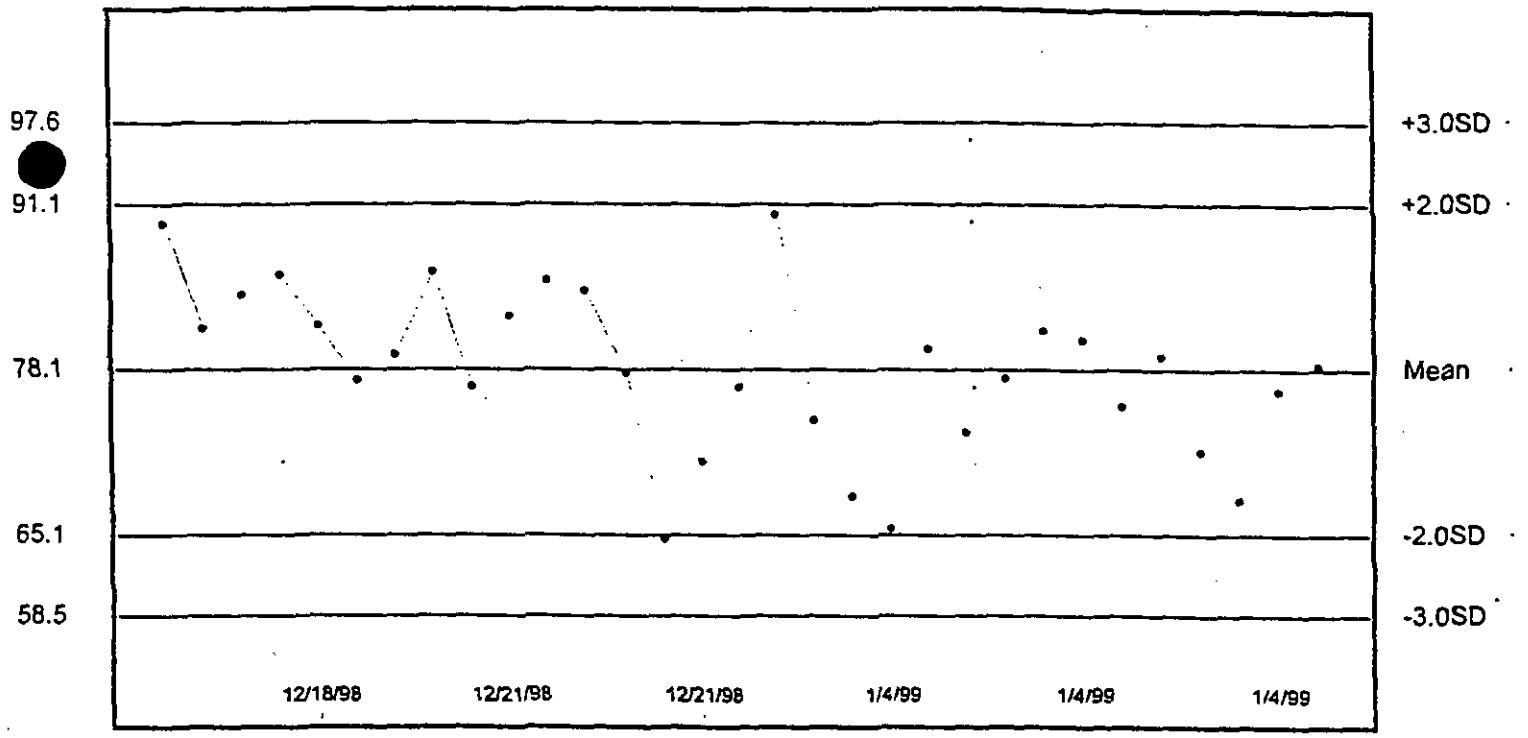
PROJ. 5356-01 ANALYTE: C13-MonoPCB INSTRUMENT: MD-800-F



n= 31 Mean= 66.8 SD= 8.8 CV= 13.11% Min= 52.7 Max= 88.1

: C:\CCPRO\VERSAR99.CCP
umn C13-MONO-PCB

PROJ. 5356-01 ANALYTE: C13-TriPCB INSTRUMENT: MD-800-F

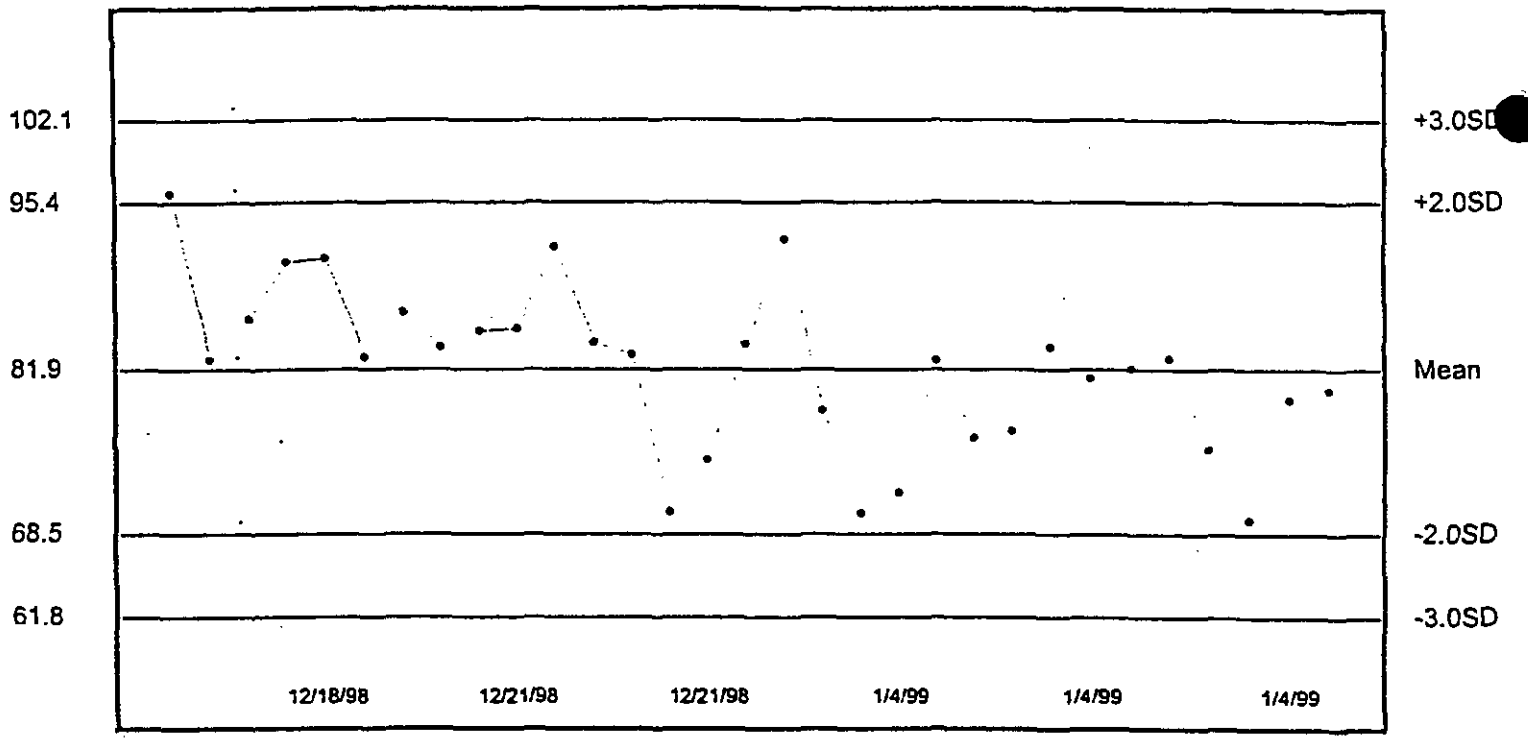


n= 31 Mean= 78.1 SD= 6.5 CV= 8.35% Min= 64.7 Max= 90.3

: C:\CCPRO\VERSAR99.CCP
umn C13-TRI-PCB

VERSAR [PCB] WATER

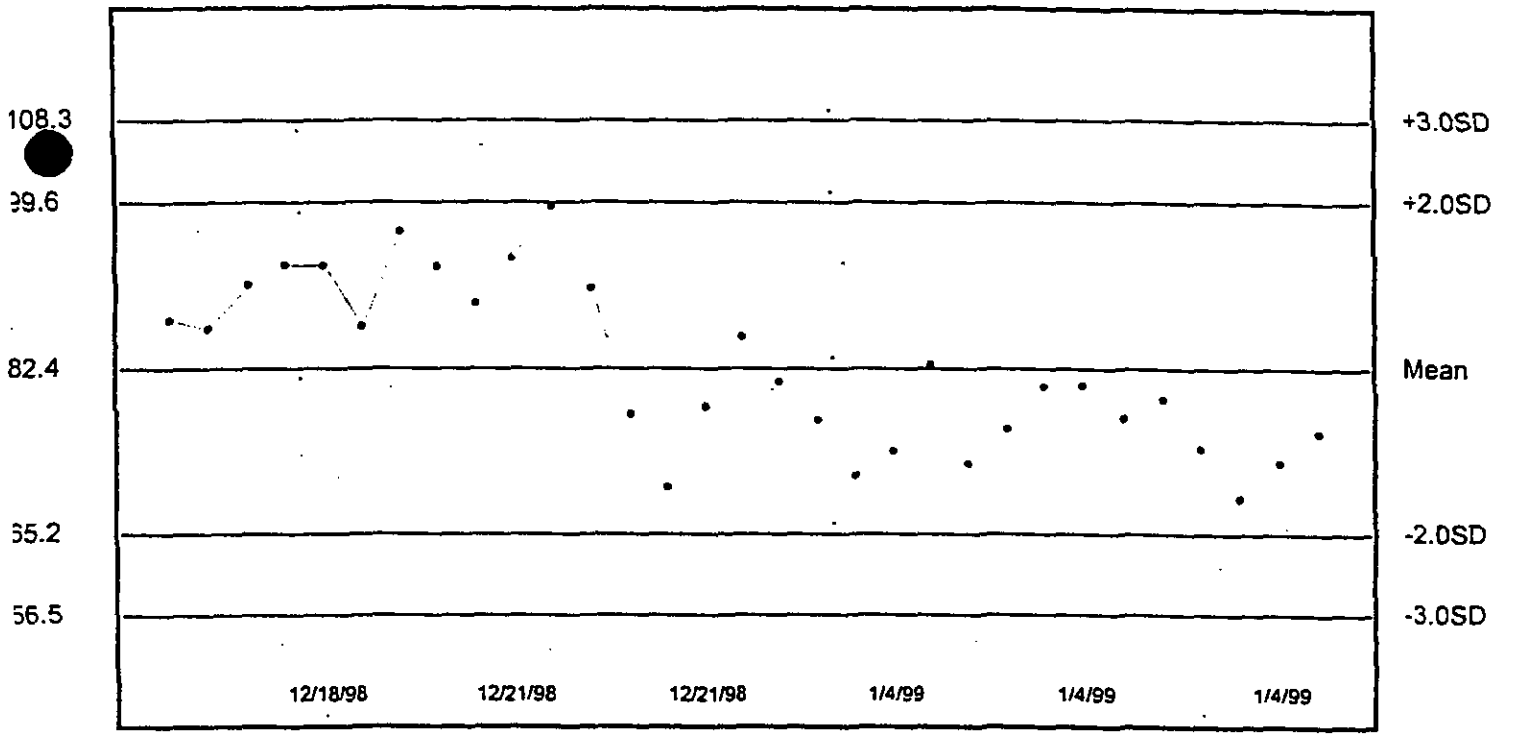
PROJ. 5356-01 ANALYTE: C13-TetraPCB INSTRUMENT: MD-800-F



n= 31 Mean= 81.9 SD= 6.7 CV= 8.21% Min= 69.6 Max= 96.1

: C:\CCPRO\VERSAR99.CCP
lumn C13-TETRA-PCB

PROJ. 5356-01 ANALYTE: C13-HexaPCB INSTRUMENT: MD-800-F

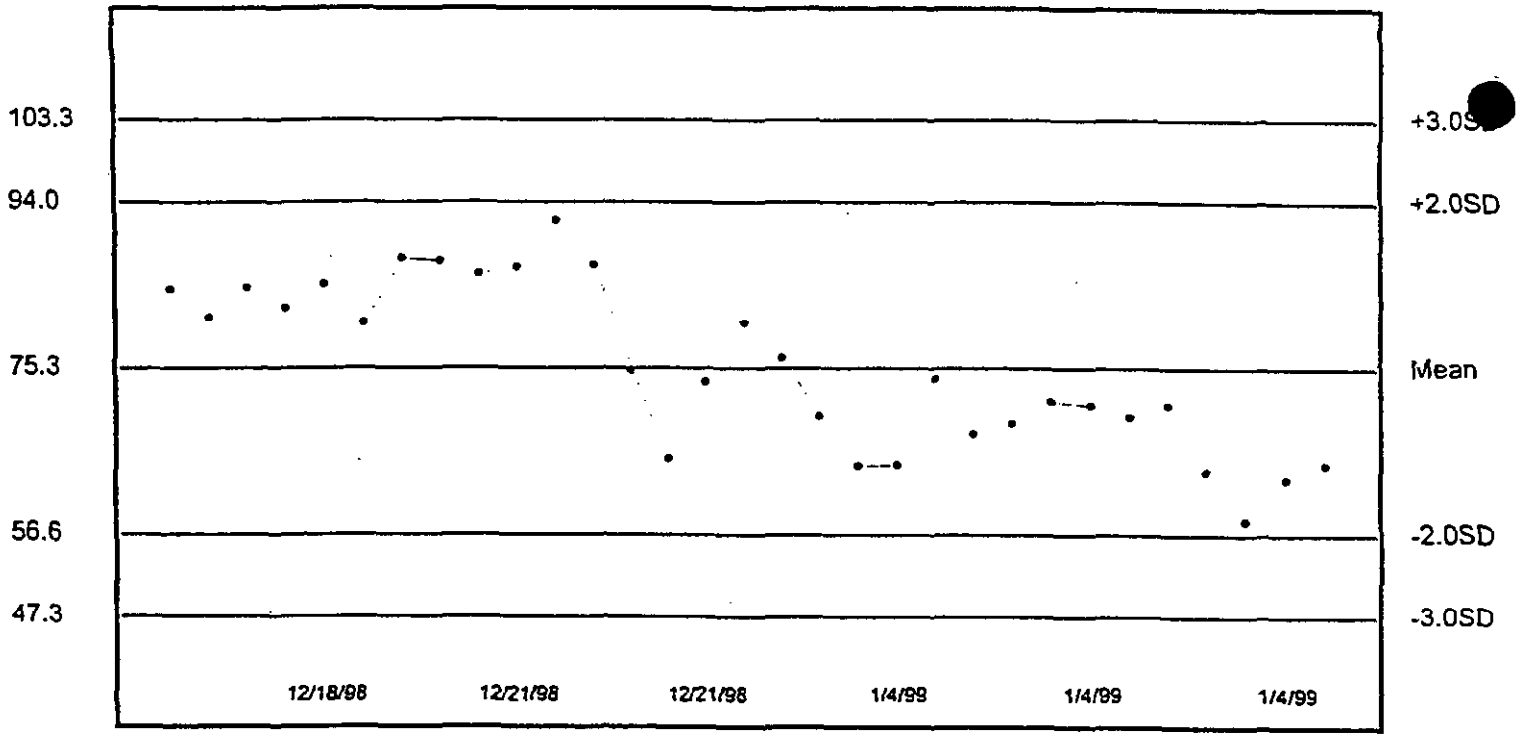


n= 31 Mean= 82.4 SD= 8.6 CV= 10.46% Min= 68.9 Max= 99.2

: C:\CCPRO\VERSAR99.CCP
umn C13-HEXA-PCB

SURROGATE RECOVERY SUMMARY. VERSAR [PCB] WATER

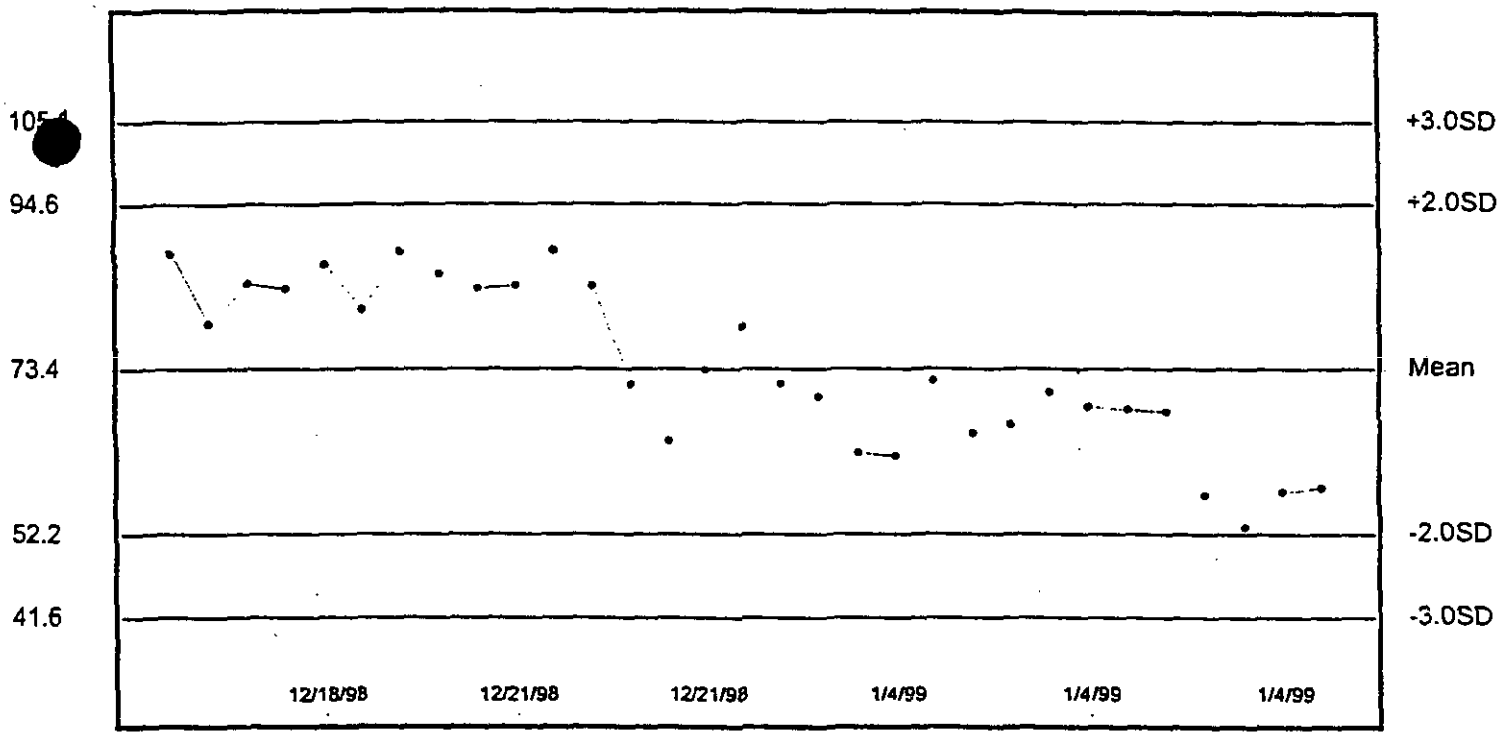
PROJ. 5356-01 ANALYTE: C13-OctaPCB INSTRUMENT: MD-800-F



n= 31 Mean= 75.3 SD= 9.3 CV= 12.41% Min= 58.1 Max= 91.9

le: C:\CCPRO\VERSAR99.CCP
olumn C13-OCTA-PCB

PROJ. 5356-01 ANALYTE: C13-DecaPCB INSTRUMENT: MD-800-F

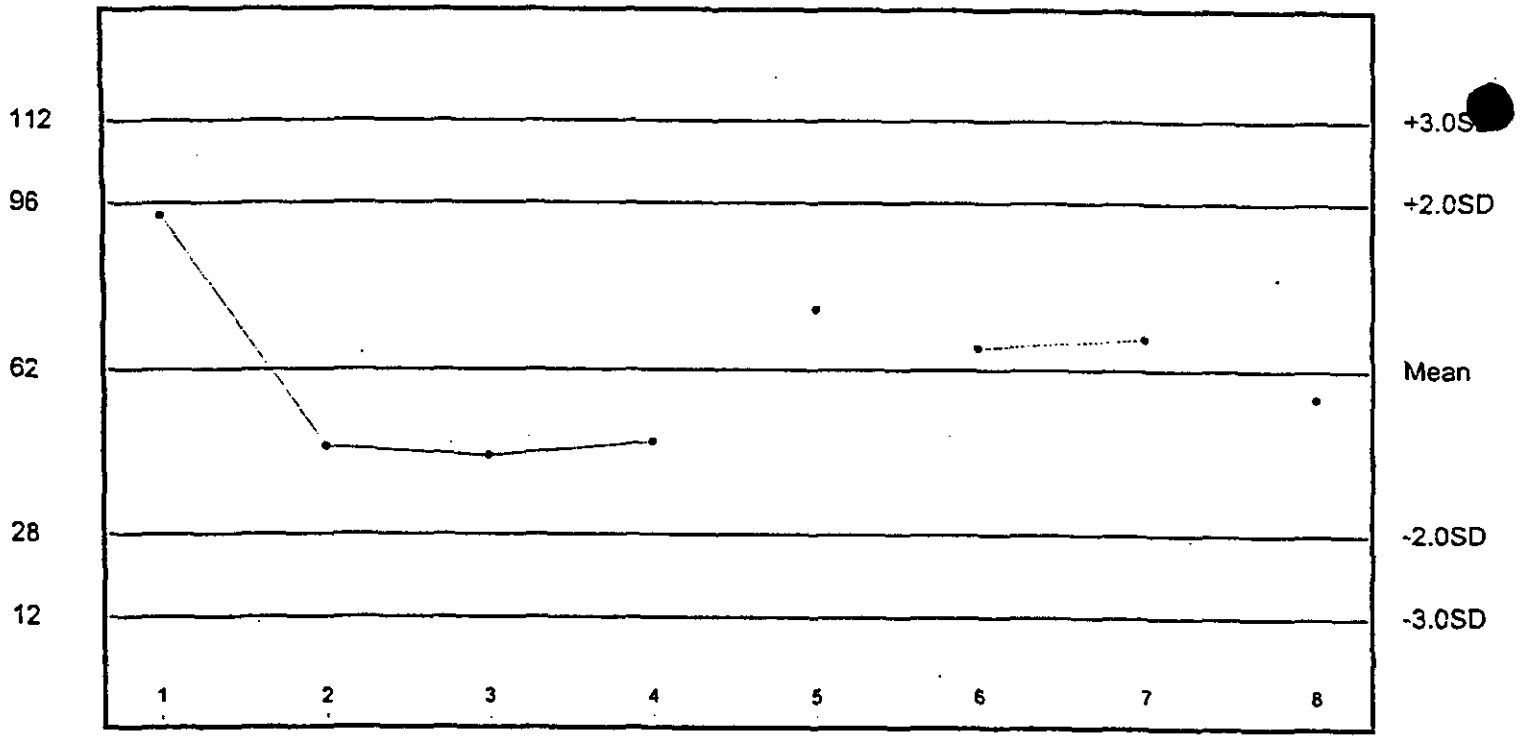


n= 31 Mean= 73.4 SD= 10.6 CV= 14.42% Min= 53.1 Max= 88.5

: C:\CCPRO\VERSAR99.CCP
lumn C13-DECA-PCB

SURROGATE RECOVERY SUMMARY. VERSAR [PCB] SEDIMENT

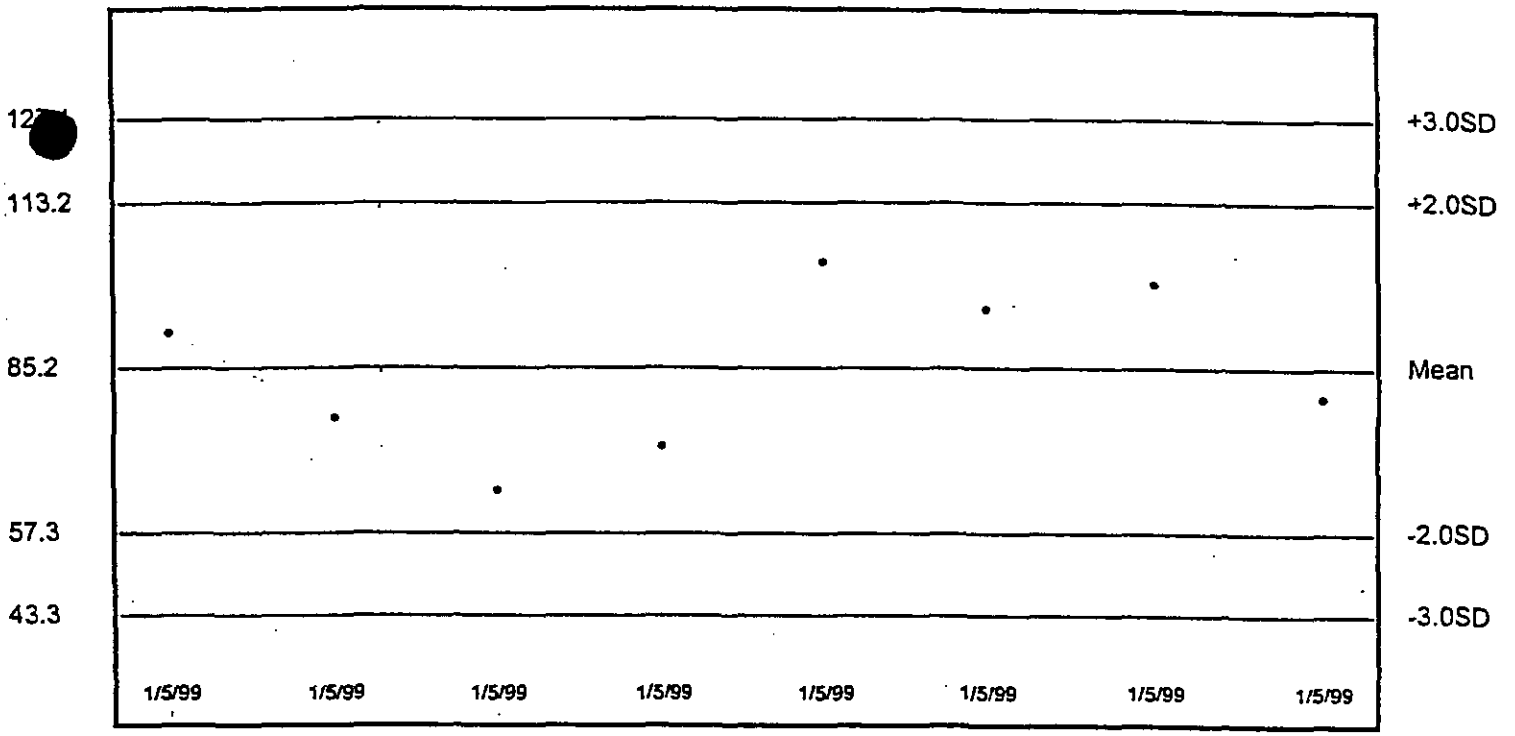
PROJ. 5356-01 ANALYTE: C13-MonoPCB INSTRUMENT: MD-800-F



n= 8 Mean= 62 SD= 17 CV= 27.10% Min= 44 Max= 93

'e: C:\CCPRO\VERSED99.CCP
olumn C13-MONO-PCB

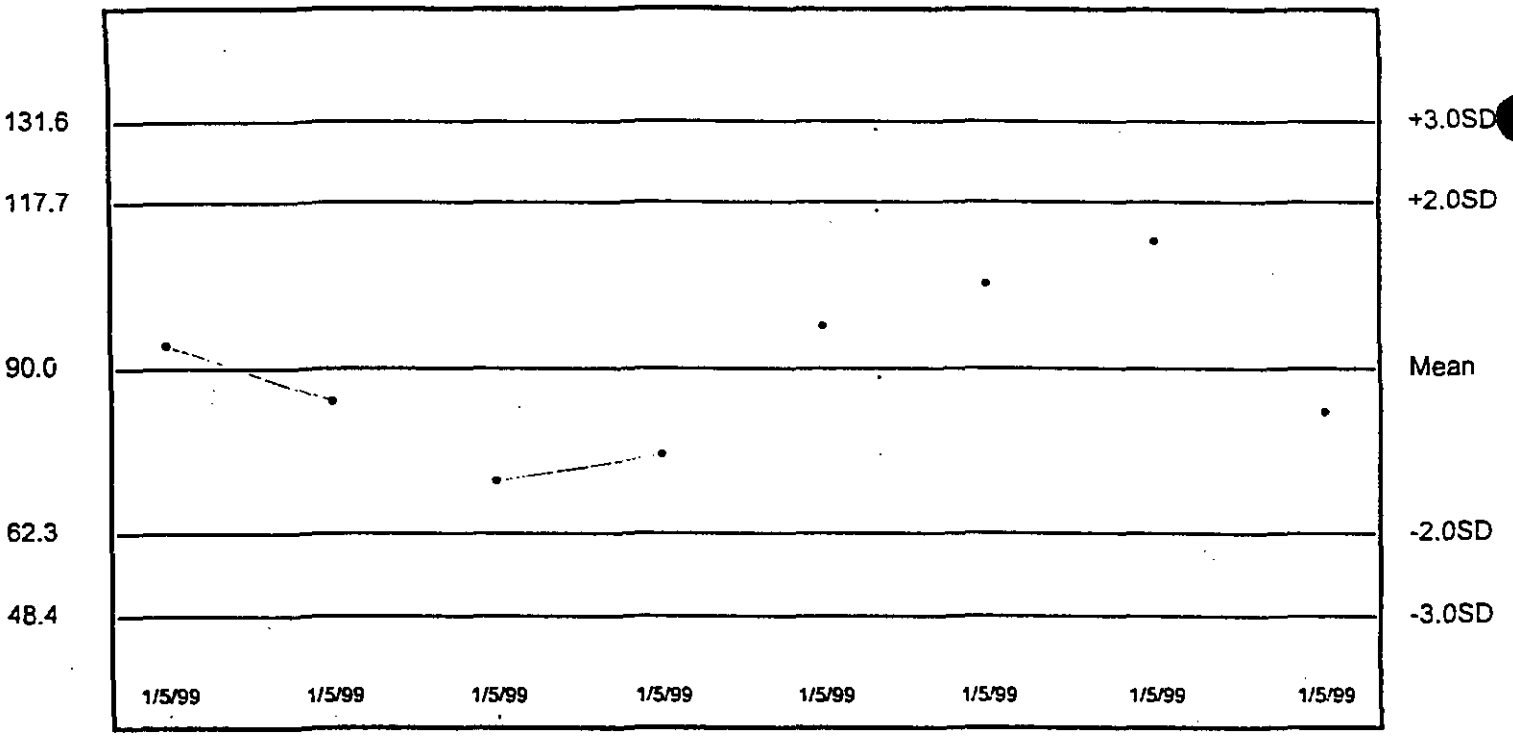
PROJ. 5356-01 ANALYTE: C13-TriPCB INSTRUMENT: MD-800-F



n= 8 Mean= 85.2 SD= 14.0 CV= 16.40% Min= 64.3 Max= 103.1

: C:\CCPRO\VERSED99.CCP
umn C13-TRI-PCB

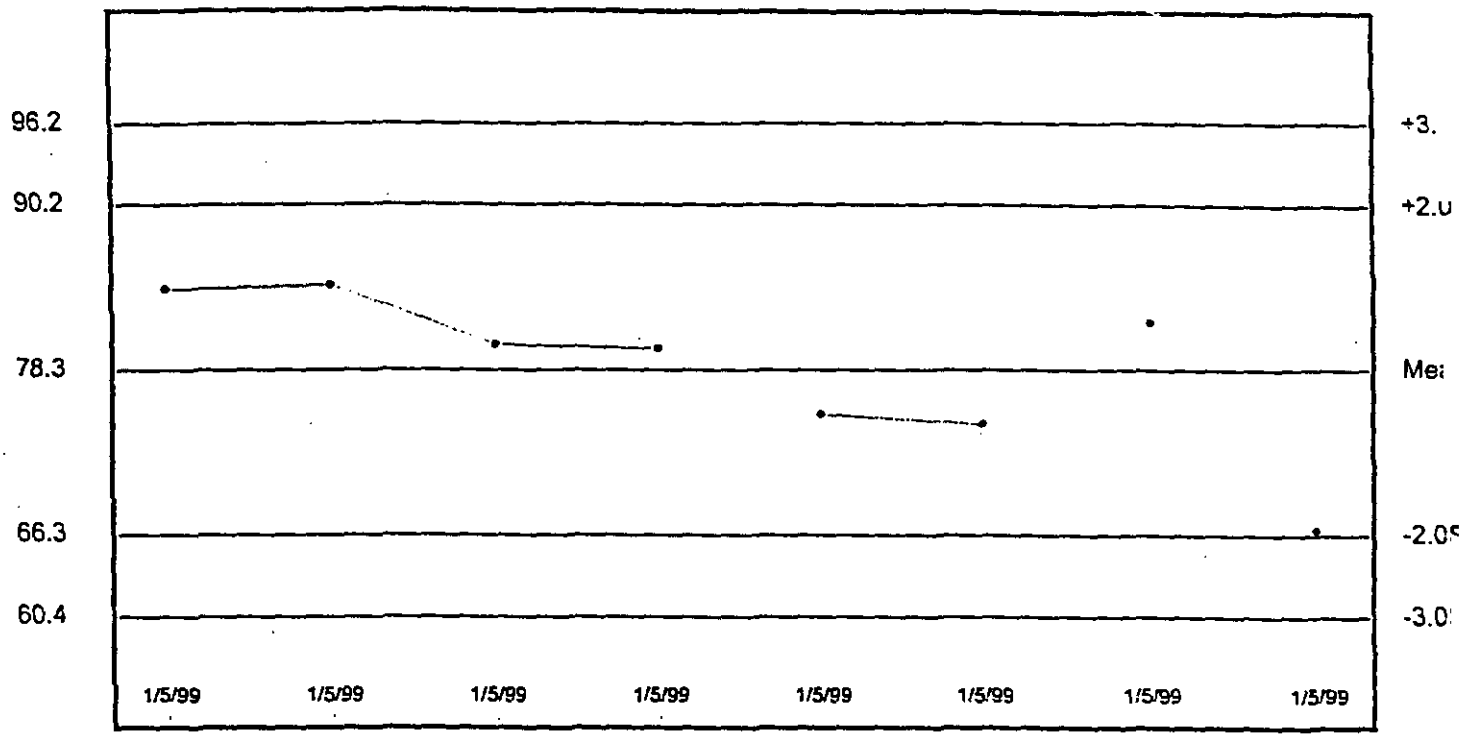
PROJ. 5356-01 ANALYTE: C13-TetraPCB INSTRUMENT: MD-800-F



n= 8 Mean= 90.0 SD= 13.9 CV= 15.41% Min= 71.2 Max= 111.1

e: C:\CCPRO\VERSED99.CCP
olumn C13-TETRA-PCB

PROJ. 5356-01 ANALYTE: C13-HexaPCB INSTRUMENT: MD-800-F

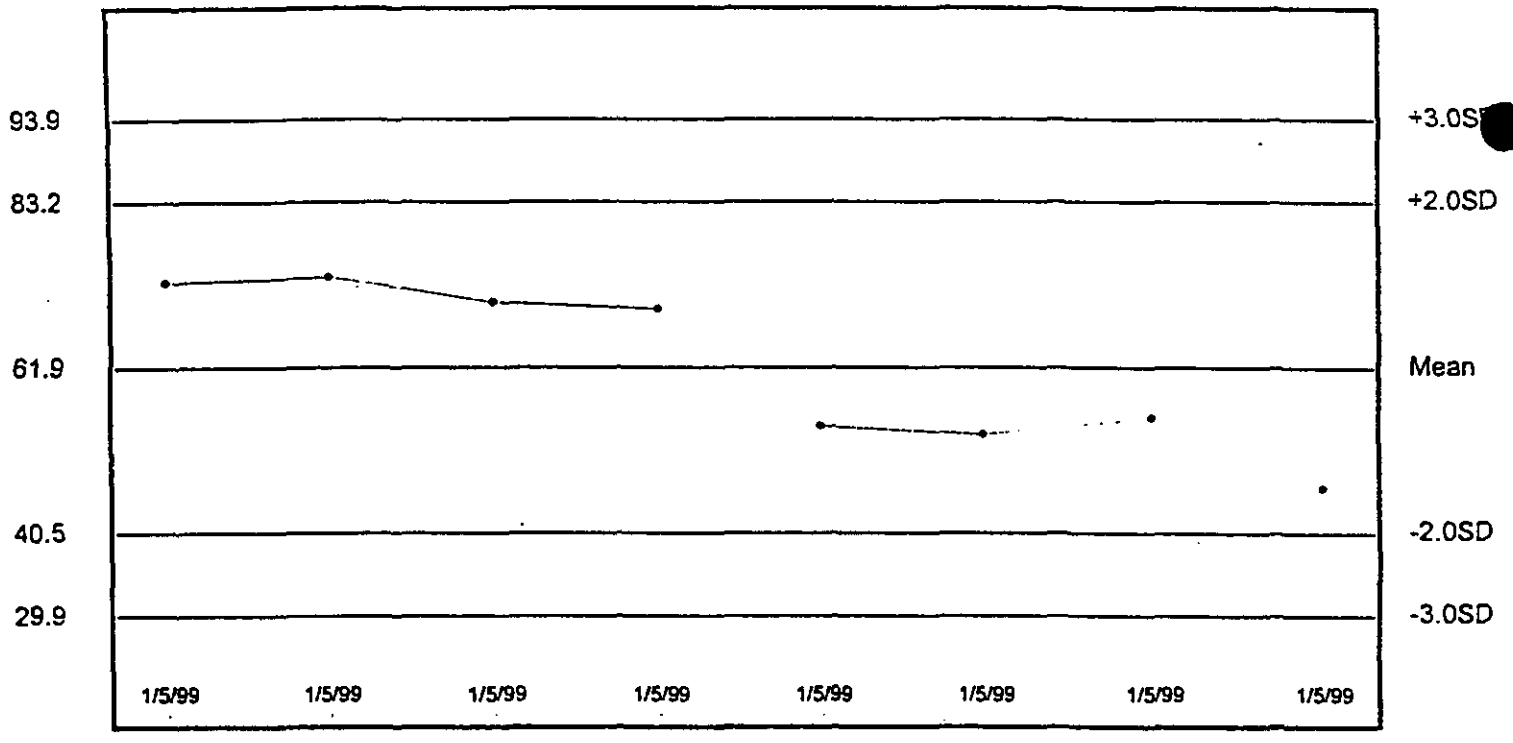


n= 8 Mean= 78.3 SD= 6.0 CV= 7.63% Min= 66.7 Max= 84.4

: C:\CCPRO\VERSED99.CCP
lumn C13-HEXA-PCB

SURROGATE RECOVERY SUMMARY: VERSAR [PCB] SEDIMENT

PROJ. 5356-01 ANALYTE: C13-OctaPCB INSTRUMENT: MD-800-F



n= 8 Mean= 61.9 SD= 10.7 CV= 17.24% Min= 46.3 Max= 73.5

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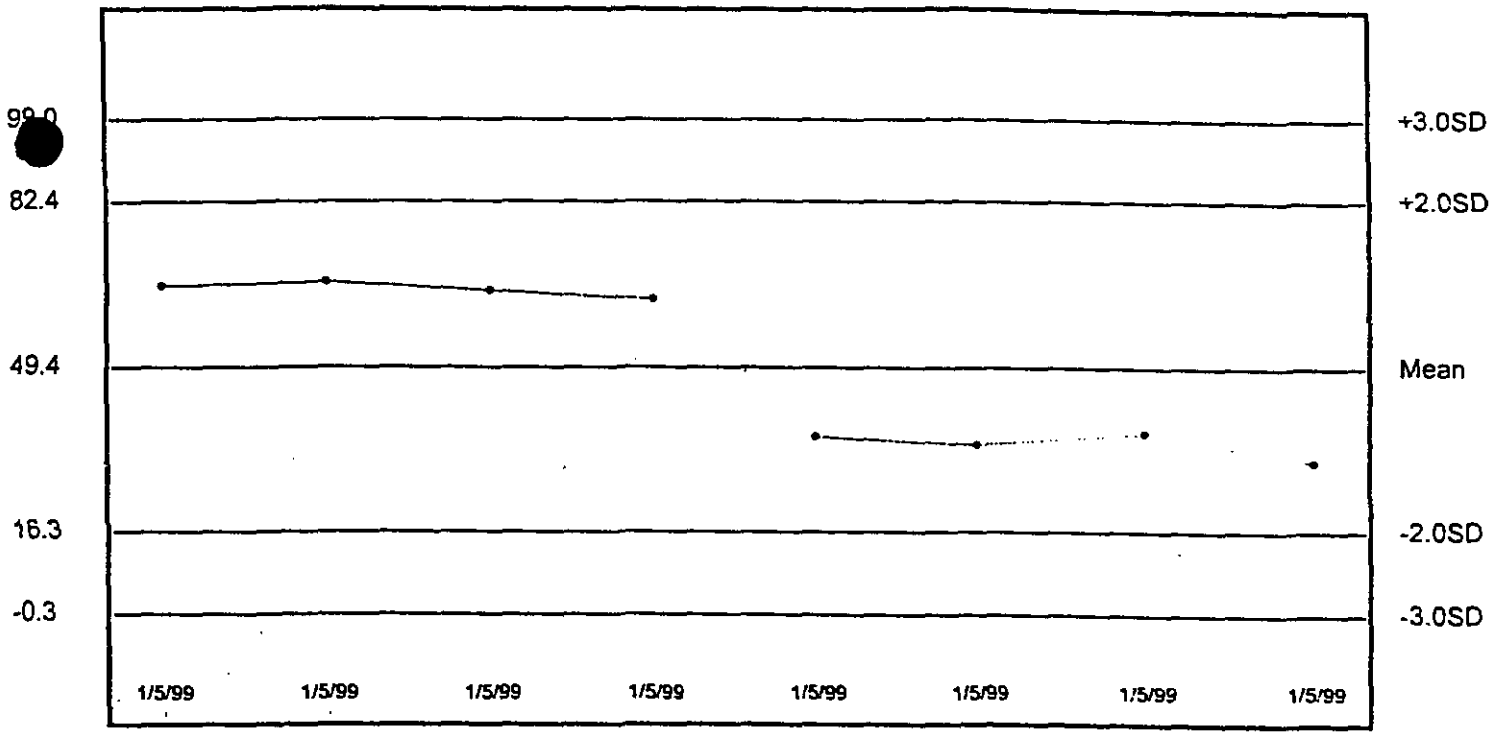
olumn C13-OCTA-PCB

PROJ. 5356-01 ANALYTE: C13-DecaPCB INSTRUMENT: MD-800-F



n= 8 Mean= 49.4 SD= 16.5 CV= 33.51% Min= 30.3 Max= 66.2

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olumn C13-DECA-PCB

APPENDIX D

Pedricktown North Confined Disposal Facility
Total Maximum Daily Load Data